Hidden Meadows Oak Woodlands and Island Residential

SPA99-002, R99-012, TM 5175, P99-013, TM 5176, P99-014, P79-152W7M1

BIOLOGICAL TECHNICAL REPORT

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Hidden Meadows
Oak Woodlands and Island Residential Projects
Biological Technical Report

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SUMMARY OF FINDINGS

The proposed Oak Woodlands (TM 5175) and Island Residential (TM 5176) projects are 72- and 131-unit residential developments with associated infrastructure on 55.7- and 92.3-acre sites respectively in the Hidden Meadows area of the unincorporated portion of San Diego County. The Oak Woodlands site is located south of Meadow Glen Way East and west of Mountain Meadows Road, while the Island Residential site is north of Hidden Meadows Road and east of Mountain Meadows Road. Both sites are within the County of San Diego's North County Metropolitan Community Planning Area.

The Oak Woodlands property supports 15 habitat/cover types with a total of 39 animal and 151 plant species observed or detected. This proposed project would directly impact approximately 19.07 acres and approximately 13.5 acres of habitat on site, including coast live oak woodland, native grassland, southern coast live oak riparian forest, and southern willow scrub (Table S-1). All potential impacts to natural habitat as well as non-native grassland are assessed as significant unless mitigated due to the habitats being considered sensitive by the federal and state agencies, or the County.

The Island Residential property supports 12 habitat/cover types with a total of 41 animal and 129 plant species observed or detected. The proposed project would directly impact 62.6 acres and approximately 53.1 acres of wildlife habitat on site, including southern mixed chaparral, Engelmann oak woodland, coast live oak woodland, coastal sage scrub, southern willow scrub, and mule fat scrub. Additional impacts to coastal sage scrub, coastal sage-chaparral scrub, and southern mixed chaparral would occur off site due to the extension and realignment of Hidden Meadows Road. All these potential impacts are assessed as significant unless mitigated per the criteria applied to the Oak Woodlands project.

Sensitive plant species observed included summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), Engelmann oak (*Quercus engelmannii*), and ashy spike moss (*Selaginella cinerascens*) at both sites. Sensitive animal species observed include San Diego horned lizard (*Phrynosoma coronatum blainvillei*), coastal western whiptail (*Cnemidophorus tigris multiscutatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), white-tailed kite (*Elanus leucurus*), and turkey vulture (*Cathartes aura*). Evidence of southern mule deer (*Odocoileus hemionus fuliginata*) was observed on the Oak Woodlands site. The proposed projects would impact the sensitive plants and potentially all of the sensitive animal species either by direct impact to habitat or from disturbance during construction.

The project impacts will be mitigated by the dedication of 61.2 acres on the sites with full mitigation being achieved by wetland creation and restoration, restoration of 2.85 acres previously unauthorized clearing for agriculture and 1.28 acres of disturbed habitat to non-native grassland, and off-site acquisition of approximately 8.1 acres of coastal sage scrub and 0.6 acre native grassland. Mitigation for impacts to many habitats for which there is insufficient on-site, in-kind preservation will be fulfilled by preserving high quality coast live oak woodland at the Oak Woodlands site. Impacts to Engelmann oak woodland and coast live oak woodland shall be mitigated at 2:1 and 1:1 ratios respectively by preserving Engelmann oak woodland and coast live oak woodland at the Island site and coast live oak woodland on the Oak Woodlands site. If the coast live oak woodland not used to offset impacts to other habitat types is applied to the Engelmann oak woodland mitigation, the net mitigation ratio is almost 2.5:1. The project impacts to coastal sage scrub will be mitigated at a 1:1 ratio by the acquisition of 8.1 acres of coastal sage scrub habitat in the San Vicente Conservation Bank to meet federal Endangered Species Act (FESA) and California Natural Community Conservation Planning (NCCP) Act requirements. Unavoidable impacts to southern willow scrub and mule fat scrub shall be mitigated at a 3:1 and 2:1 ratio, respectively, by wetland creation and restoration/enhancement of existing disturbed wetland habitat to meet state and federal no net-loss of wetland mitigation standards. Impacts to non-native grassland shall be mitigated at a 0.5:1 ratio by the on-site preservation of non-native grassland and coast live oak woodland. Impacts to native grassland shall be mitigated with purchase of 0.6 acre in the Vicente Conservation Bank. The impacts to southern mixed chaparral and scrub oak chaparral shall be mitigated at a 0.5:1 ratio by the on-site preservation of this habitat and coast live oak woodland at the Oak Woodlands site.

Table S-1
SUMMARY OF IMPACTS AND MITIGATION

HABITAT	IMPACTS				MITIGATION REQUIREMENT		OPEN SPACE HABITAT				Available Mitigation Minus Required Mitigation[1]
	TM 5175	TM 5176	Off-Site	Total	Ratio	Acreage	TM 5175	TM 5176	Off-Site	Total	
HIGH SENSITIVITY											
Coastal and valley freshwater marsh							0.05			0.05	
Southern arroyo willow riparian forest							4.07			4.07	
Southern coast live oak riparian forest	0.16[2]			0.16[2]			4.46			4.46	
Southern willow scrub	0.02	0.13		0.15	3:1	0.15 created; 0.30 enhance/	0.03	0.13		0.16	0.45 enhance/create
Mule fat scrub		0.05		0.05	2:1	0.1 create/enhance					0.1 create/enhance
Disturbed wetland							0.84			0.84	Potential restoration
Dense Engelmann oak woodland		1.15	0.16	1.31	2:1	2.62		1.13		1.13	-1.49
Open Engelmann oak woodland		5.84		5.84	2:1	11.68		3.18		3.18	-8.5
Dense coast live oak woodland	2.37	0.35	0.9	3.62	1:1	3.62	21.89	1.2		23.09	19.47
Open coast live oak woodland	1.61	0.70		2.31	1:1	2.31	0.06	0.19		0.25	-2.06
Native grassland	0.15		0.05	0.20	3:1	0.60	0.02		0.60	0.02	0
MODERATE SENSITIVITY											
Diegan coastal sage scrub		5.97	0.56	6.53	1:1	6.53	0.15	0.18	6.53	6.86	0
Coastal sage-chaparral scrub	0.99		0.55	1.55	1:1	1.55	0		1.55	1.55	0
LOW SENSITIVITY											
Southern mixed chaparral	0.27	38.88	1.56	40.71	0.5:1	20.36	0.65	17.50		18.15	-2.21
Scrub oak chaparral	2.72			2.72	0.5:1	1.36	0.09			0.09	-1.27
Non-native grassland	5.19		0.16	5.35	0.5:1	2.68	1.24			1.24	-1.44
OTHER											
Disturbed habitat	4.75	6.38	1.67	12.80	None		0.44	0.84		1.28	1.28[3]
Intensive agriculture		2.48	0.36	2.84	None			2.85		2.85	2.85[4]
Developed	0.83	0.63	1.13	2.59	None		0.02	0.02		0.04	
TOTAL	**19.07**	**62.56**	**7.10**	**88.73**			**34.01**	**27.22**	**8.68**	**69.91**	

[1]A negative balance indicates the required mitigation acreage that is compensated for by the positive mitigation balance of dense coast live oak woodland.
[2]Impact avoided due to fire-clearing variance from Deer Springs Fire Marshal.
[3]Restored to non-native grassland.
[4]Restored to chaparral.

Impacts to the southern arroyo willow and coast live oak riparian forest habitats are being avoided with the habitats not being used to mitigate impacts to other habitats.

Impacts to ashy spike moss and summer holly are not significant, but will be mitigated with preservation of potential habitat on site and acquisition of coastal sage scrub off site. Impacts to Englemann oaks will be offset by conservation of the highest quality Englemann oak woodland at the Island Residential site. Impacts to sensitive animal species, including San Diego horned lizard, coastal western whiptail, Cooper's hawk, white-tailed kite, red-shouldered hawk, turkey vulture and southern mule deer, will be mitigated via habitat preservation on site, avoidance of construction within 500 feet of active raptor nests, and coastal sage scrub habitat acquisition off site.

Both sites currently are connected to larger areas of natural habitat (to the south of the Island Residential project and to the west of the Oak Woodlands project) but no evidence of continuous usage by wide-ranging species such as mule deer or mountain lion was found. Due to constraints from surrounding development and land uses, the sites most likely only provide for local wildlife movement rather than regional wildlife movement. The projects have attempted to avoid impacts to local corridors by design. Habitat fragmentation and edge effects on the Island Residential site will be mitigated by the permanent preservation of regionally significant coast live oak woodland habitat at the Oak Woodlands site and off-site acquisition of coastal sage scrub habitat.

1.0 INTRODUCTION

Biological resources studies were conducted at the request of Hidden Meadows, LLC for the proposed projects to provide the project applicant, the County of San Diego, resource agencies, and the public with current biological data to satisfy the review of the projects under the California Environmental Quality Act (CEQA) and other County, state and federal regulations. This report describes the vegetation communities and wildlife observed or detected on the sites and identifies those resources that are sensitive. It also identifies sensitive species with potential to occur on the sites but that were not observed or detected, perhaps due to the timing of surveys or the lack of focused surveys for those species (surveys for these species are generally not performed unless they are state or federally listed). In addition, project impacts are assessed in this report, and mitigation is proposed to offset significant impacts from the proposed projects.

1.1 PROJECT DESCRIPTIONS

1.1.1 Oak Woodlands

The proposed Oak Woodlands projects is a 72-unit residential development with associated infrastructure and open space on a 55.7-acre project site. The site (Assessor's Parcel Numbers 186-330-50 and 186-330-56) is to be subdivided into 77 lots, 72 for residential development in the east and northwest of the project, two for open space, and three for private street development. The proposed biological open space contains 33.55 acres of habitat. The 11 residential lots in the northwest will be accessed from Meadow Glen Way West which is to be extended and improved from where Moss Tree Lane intersects Meadow Glen Way West to Meadow Glen Way East. The remaining 61 residential lots will be accessed by two streets, Spruce Woodland Way and Oak Spur Way, coming directly off of Mountain Meadow Road.

1.1.2 Island Residential

The Island Residential site (Assessor's Parcel Numbers 186-500-61, 186-500-62, 186-500-64, 186-500-65, and 186-500-66) consists of 92.3 acres of land that is proposed for residential development, natural open space, and improved open space. The site is to be subdivided into 144 lots, 131 of which are designated for residential development, four for open space, eight for private street development, and one for a sewer pump station. The proposed biological open space consists of 27.22 acres of habitat and habitat to be restored, and is located within the southeastern corner and the northwestern portion of the property. The residential areas will be accessed via the extension of Hidden Meadows Road east from the existing spur off Mountain Meadow Road and the creation of Granite Ridge Road which will extend south from Meadow Glen Way East at the northeast corner of the property. Hidden Meadows Road will intersect with Granite Ridge Road on the eastern side of the property. The extension of Hidden Meadows Road will create some off-site impacts.

1.2 LOCATION

The project sites are located in the unincorporated portion of San Diego County, northwest of the City of Escondido (Figure 1). They occur east of Interstate 15 within the purview of the Hidden Meadows Sponsor Group of the County of San Diego's North County Metropolitan Community Planning Area. The Oak Woodlands development site (TM 5175) is to the west of Mountain Meadows Road with development proposed for two separate areas, one adjacent to Mountain Meadows Road, the other to the west, at the end of Mountain Glen Way West. Access to the site is taken from Mountain Meadow Road and Meadow Glen Way West. The Island Residential project (TM 5176) is almost adjacent and to the east of Mountain Meadow Road, off the existing Hidden Meadows Lane. Access will be provided via the extension of Hidden Meadows Road. Both sites are located in Township 11 South, Range 2 West of the 7.5' San Bernardino Base and Meridian; USGS Valley Center Quadrangle (Figure 2).

1.3 EXISTING AND SURROUNDING LAND USES, TOPOGRAPHY AND SOILS

Currently, the sites are mostly vacant and predominantly undisturbed.

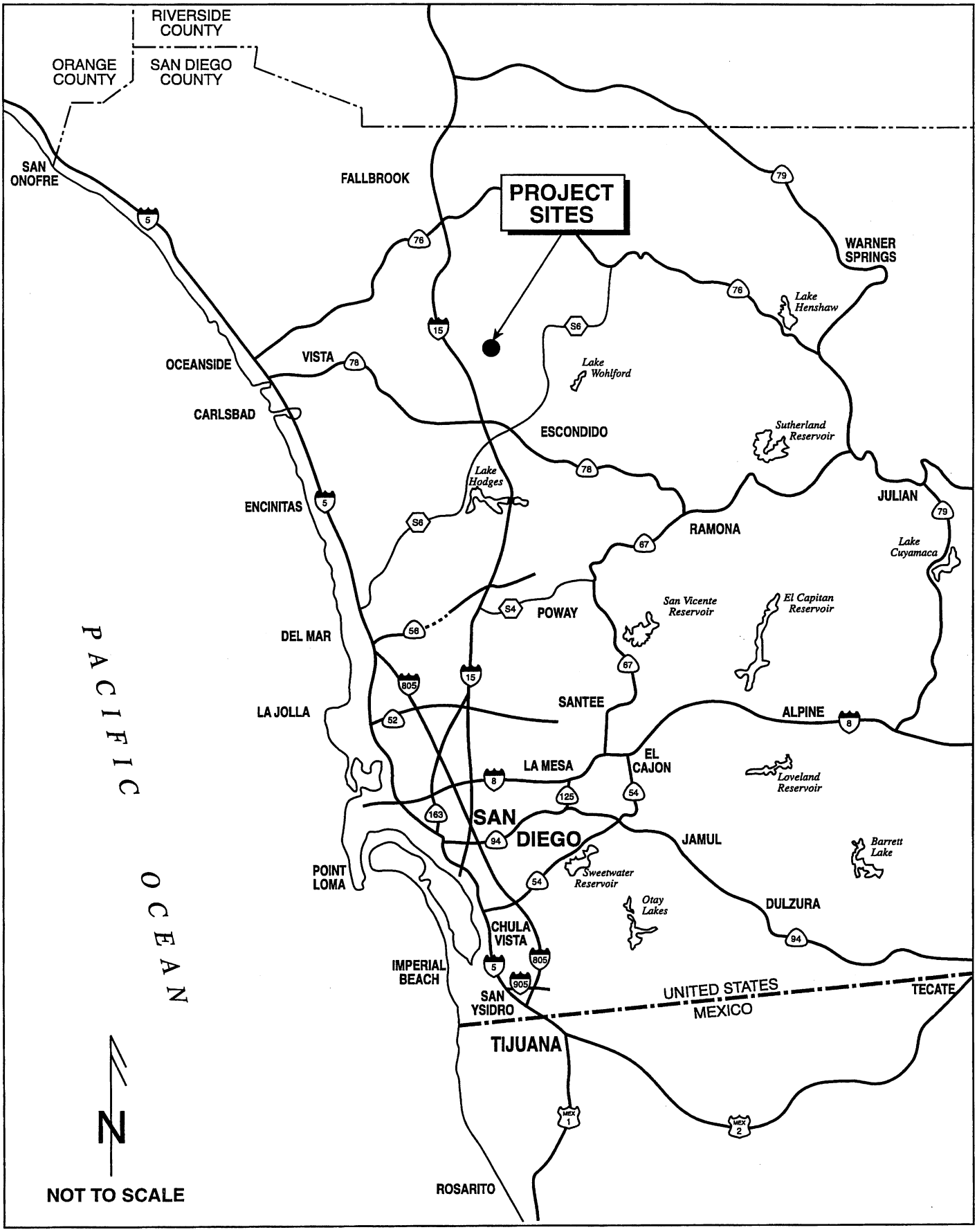
1.3.1 Oak Woodlands

The Oak Woodlands site is mainly undisturbed habitat but there are areas of disturbed vegetation at the eastern and northwestern ends of the project site where the proposed development is to occur. Two existing buildings, a dwelling and shed, are located at the western end of the property, where development is proposed. Surrounding uses are golf course and residential development to the north, Mountain Meadow Road and the Country Club to the east, estate residential and vacant land to the south, and vacant land to the west. The ridge to the south has an approved map for estate lots with open space designated between the ridgeline lots and the southern boundary of the Oak Woodlands property. This provides a buffer to the hillside habitat and maintains connectivity with the habitat to the west. The Oak Woodlands site itself consists of a valley bottom and hillside that rises to over 1,675 feet to the south. Elevations on site range from 1,290 feet above mean seal level (amsl) in the creek at the western end of the property, to 1,440 feet amsl on the hillside. Soils are Cieneba very rocky coarse sandy loam (CmrG), Fallbrook sandy loam (FaD2 and FaE2) on the slopes, with Greenfield sandy loam (GrB) on the valley floor and Visalia sandy loam (VaB) in wetland areas. Some Vista rocky coarse sandy loam (VvD) is mapped for the eastern end of the site. Greenfield and Visalia soils are deep and fertile soils. Vista series soils are moderately deep and fertile (Bowman 1973).

1.3.2 Island Residential

Existing land uses on the Island Residential site include some agriculture, dirt roads, and trails. The majority of the site is an "island" of vacant land surrounded by a golf course. Two spurs of development other than the central portion of the property are proposed. One occurs to the northeast of the main project site towards Treeside Lane and a developed area, while the other spur is to the southeast across the golf course fairways along the proposed extension of Hidden Meadows Road. Surrounding land uses include golf course and residential development to the north, golf course fairway, rural residential, avocado agriculture and some vacant land to the east, disturbed, agricultural, rural residential and vacant land to the south, and the Country Club and Mountain Meadow Road to the west. The "island" consists of a small group of knolls from which the terrain descends to the surrounding fairways. The decent is steep to the north and west but more gradual to the south and east. The southern spur of the project site sits above the northern rim of Reidy Canyon. Elevation ranges from 1,360 feet to 1,570 feet amsl. Soils on site are mapped as Cieneba sandy loams (CnG2, CmE2, and CmrG) ranging from rocky to very rocky and coarse on slopes from 9 to 75 percent, and Fallbrook sandy loam (FaE2) (Bowman 1973). Cieneba soils are shallow, infertile, excessively drained soils derived from granitic rock. Fallbrook series soils are moderately fertile and deep, and well drained.

Two wells with associated pumps are operated by the Meadow Lake Country Club in the western portion of the Oak Woodlands property. The water is used for golf course irrigation. Some residents in the community in a comment letter suggested the water extraction has affected the riparian habitat along the valley. It is difficult to determine what might be causing any of the perceived changes in the habitat due to the confounding effects of variable annual rainfall, potential natural habitat changes, and other changes in land use in the watershed feeding this creek. The golf course retains water rights to the wells. The proposed project will not change the well operations and would not exacerbate any effects that may be occurring as a result of this extraction. In addition, the project does not propose to use any of the habitats under scrutiny as mitigation.

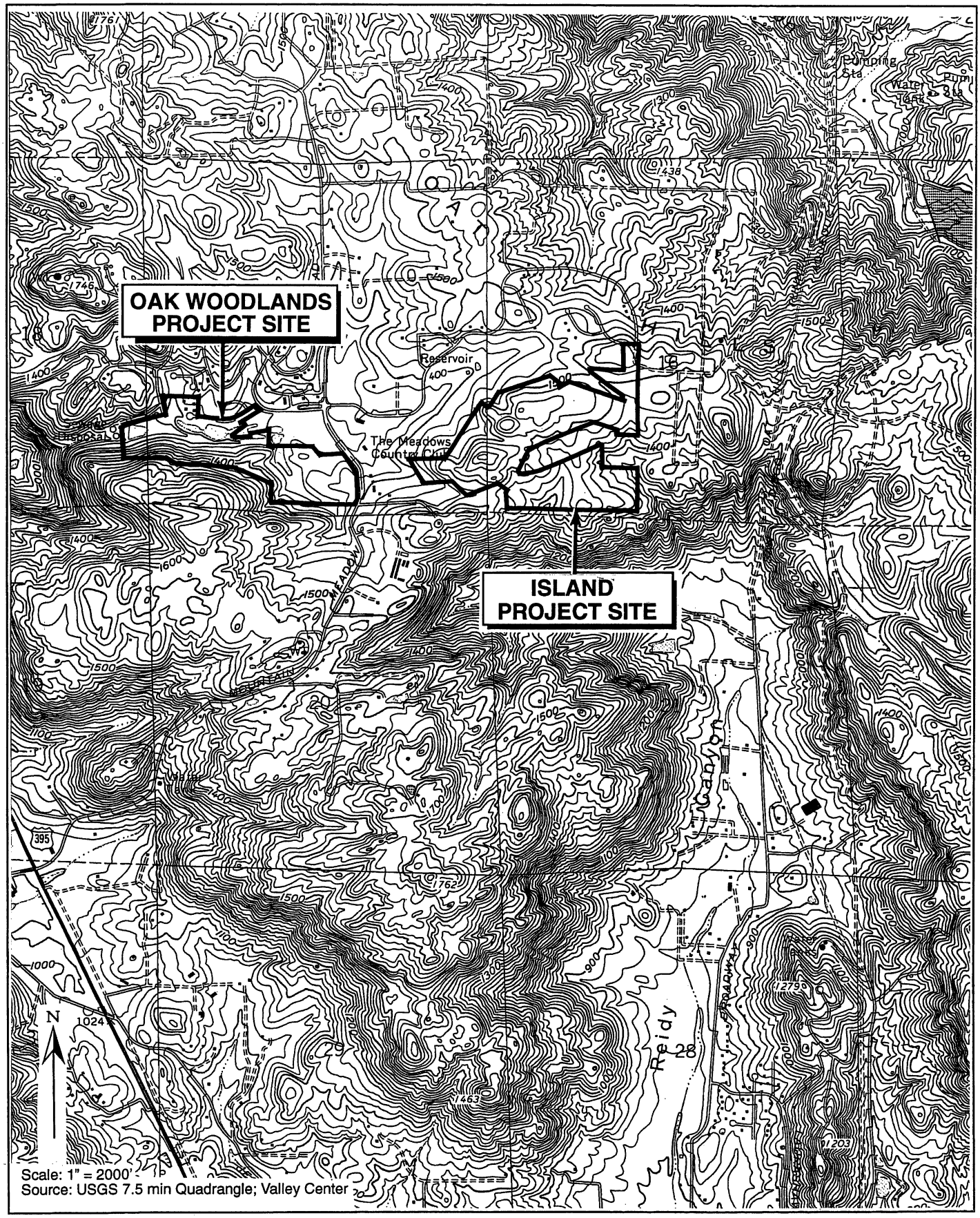


Regional Location Map

OAK WOODLANDS AND ISLAND PROJECT

HELIX

Figure 1



Project Vicinity Map

HELIX

OAK WOODLANDS AND ISLAND PROJECT

Figure 2

2.0 SURVEYS AND METHODS

The following biological resource surveys were conducted by Affinis and HELIX Environmental Planning, Inc. (HELIX) on the Oak Woodlands and Island Residential project sites: reconnaissance surveys, Quino checkerspot butterfly (*Euphydryas editha quino*) habitat assessment, vegetation mapping, general and sensitive plant surveys, general zoology survey, wildlife corridor assessment, and protocol coastal California gnatcatcher surveys. Focused surveys for quino checkerspot were completed May 4, 2000. Table 1 lists the date and personnel for each survey as well as weather conditions.

Table 1
SURVEY INFORMATION

DATE	PERSONNEL	TYPE OF SURVEY	TIME AND WEATHER CONDITIONS
OAK WOODLANDS			
08/31/98; 09/18/98	Rod Dossey, Mike Busdosh	Reconnaissance surveys	0800-1200 hours, clear, 80s °F; 1200-1600 hours, clear 80s °F
03/05/99; 05/03/99	Rod Dossey	Quino checkerspot butterfly habitat assessment	1300-1550 hours; 1500-1600 hours
11/24/99	Scott Taylor, Derek Langsford	General botanical and zoological surveys and vegetation mapping	1330-1600, clear skies, 70s °F
12/13/99	Derek Langsford	Vegetation mapping clarification	1300-1430, clear skies, low 60s °F
12/16/99	Scott Taylor	General botanical and zoological surveys	1300-1600, clear skies, low 70s °F
3/27/00	Scott Taylor, Derek Langsford	Wildlife corridor investigation	1230-1430, cloudy with light sprinkles, high 50s °F
3/29/00	Larry Sward, Sally Trnka	Wetland delineation	Mostly cloudy, high 50s to low 60s °F
3/31/00 to 5/4/00	Guy Bruyea	Protocol quino checkerspot butterfly surveys	Five weekly visits with weather conforming to protocol requirements
ISLAND RESIDENTIAL			
09/22/98; 09/29/98	Rod Dossey, Mike Busdosh	Reconnaissance surveys	0800-1400 hours, cloudy, 60s °F; 1330-1630 hours, sunny, 80s °F
03/04/99; 03/05/99	Rod Dossey	Quino checkerspot butterfly habitat assessment	0930-1530 hours; 0900-1300 hours
11/24/99	Scott Taylor, Derek Langsford	General botanical and zoological surveys and vegetation mapping	0930-1300, clear skies, 70s °F
12/13/99	Derek Langsford	Vegetation mapping of off-site impacts	11.30-1300, clear skies,high 50s °F
12/16/99	Scott Taylor	General botanical and zoological surveys	0900-1300, clear skies, calm, 60s to low 70s °F
3/27/00	Scott Taylor	Protocol California gnatcatcher survey #1	0930-1030, overcast 58 °F
3/27/00	Scott Taylor, Derek Langsford	Wildlife corridor investigation, Engelmann oak mapping	0930-1230 cloudy with light sprinkles, high 50s °F
3/29/00	Larry Sward, Sally Trnka	Wetland delineation	Mostly cloudy, high 50s to low 60s °F
3/31/00 to 4/5/00	Guy Bruyea	Protocol quino checkerspot butterfly surveys	Five weekly visits with weather conforming to protocol requirements
4/3/00	Scott Taylor	Protocol California gnatcatcher survey #2	0830-0930, overcast 63 °F
4/11/00	Scott Taylor	Protocol California gnatcatcher survey #3	0840-0950, clear 60 °F

Affinis prepared reports of their reconniassance surveys and quino habitat assessments, and the information contained in those reports was referred to during HELIX's visits. The data produced by Affinis and furnished by the project proponent is incorporated into this report and assumed to be accurate unless updated by HELIX.

HELIX mapped the sites' vegetation in the field with the aid of 1" to 200' and 1" to 400' scale aerial photographs, and 1" to 100' topographic maps of the sites. Areas of wetland vegetation were identified in areas with depressions or drainage channels. Potential federal jurisdiction non-wetland waters and California Department of Fish and Game jurisdictional streambeds were also identified and mapped. Formal wetland delineation was also performed to meet County Resource Protection Ordinance, federal wetland permitting, and state streambed alteration agreement requirements.

The general botanical surveys were performed on foot. Roads and trails were used as access, and forays were made into the surrounding vegetation where possible, taking into account different soil types, slopes, and aspects. Sensitive plant species were identified in the field or later identified using plant keys and expertise of other HELIX staff. The general zoology survey was conducted using direct observation and identification of song or alarm calls, or through indirect observation, namely of burrow, scat, and tracks.

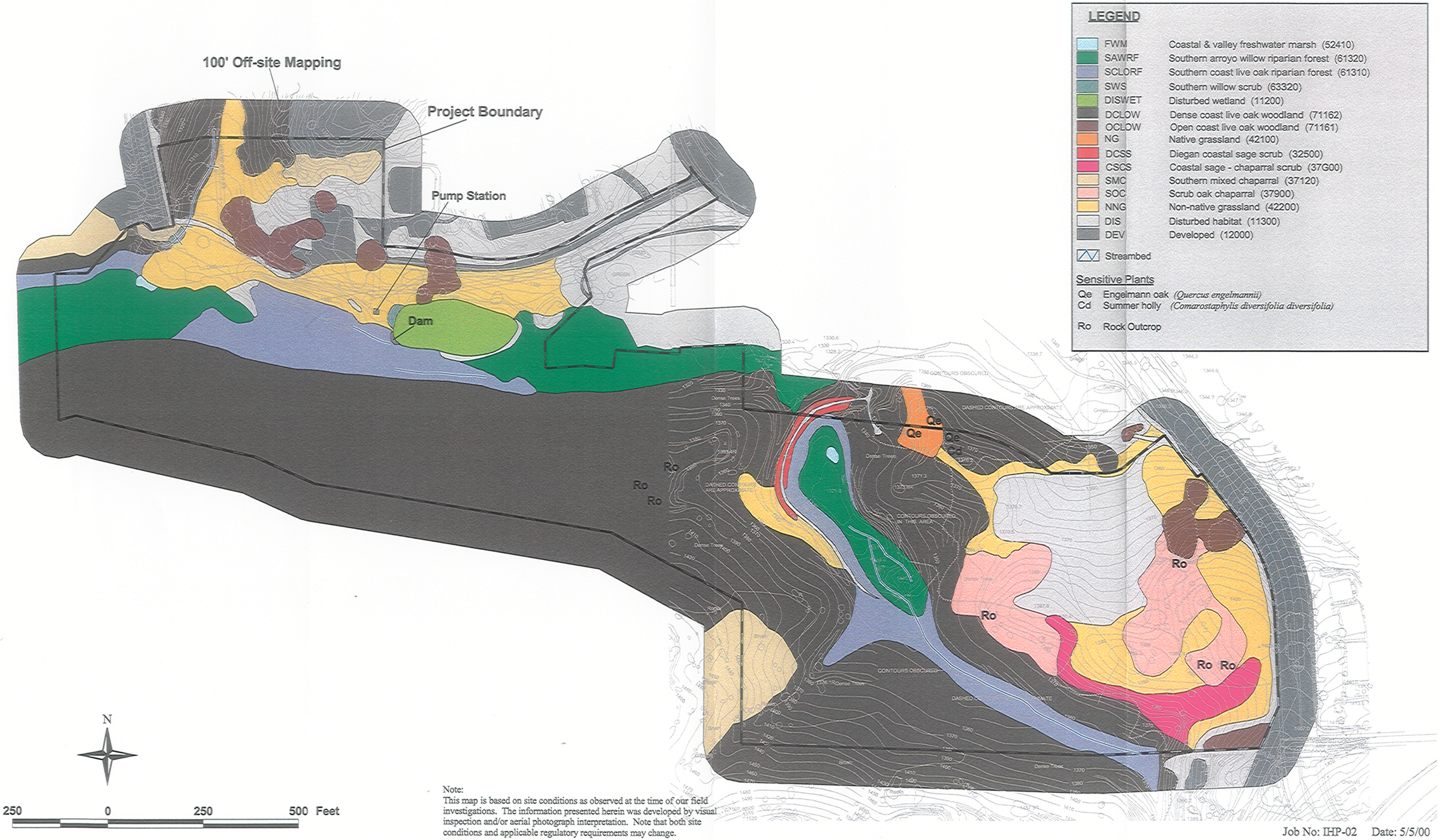
HELIX biologist Scott Taylor (USFWS Permit No. TE 778195) performed protocol California gnatcatcher surveys and Guy Bruyea of Bruyea Biological Consulting Services (USFWS Permit No. TE 837439) performed protocol quino checkerspot butterfly surveys on the project sites.

2.1 NOMENCLATURE

Nomenclature used in this report comes from Hickman (1993) for plants, Garth and Tilden (1986) for butterflies, Collins (1997) for amphibians and reptiles, American Ornithologists' Union (1998) for birds, and Jones et al. (1997) for mammals. The vegetation community categories are from Holland (1986) and Oberbauer (1996). If common plant names were not listed in Hickman (1993), Beauchamp (1986) was used.

2.2 SURVEY LIMITATIONS

Not all plants that may have been present were necessarily observable due to the plant specific surveys being performed in fall in both 1998 and 1999. Surveys for annuals are best done in spring, but to achieve thorough biological inventories, surveys in different seasons are preferable. As a result, some annual plants may not have been identified. The general zoology survey did not include trapping for rodents or reptiles, some species of which are highly likely to occur but were not observed. Because surveys were performed in daylight, nocturnal animals were not directly observed. Additionally, some species occur in such low numbers they can easily be missed. For these reasons, other means such as database searches, habitat requirements, and knowledge of species distribution were used to determine the probability that other sensitive species may be present when field survey is not feasible or not warranted.



Note:
This map is based on site conditions as observed at the time of our field investigations. The information presented herein was developed by visual inspection and/or aerial photograph interpretation. Note that both site conditions and applicable regulatory requirements may change.

Job No: IHP-02 Date: 5/5/00

Vegetation and Sensitive Resources

TM 5175 OAK WOODLANDS

HELIX

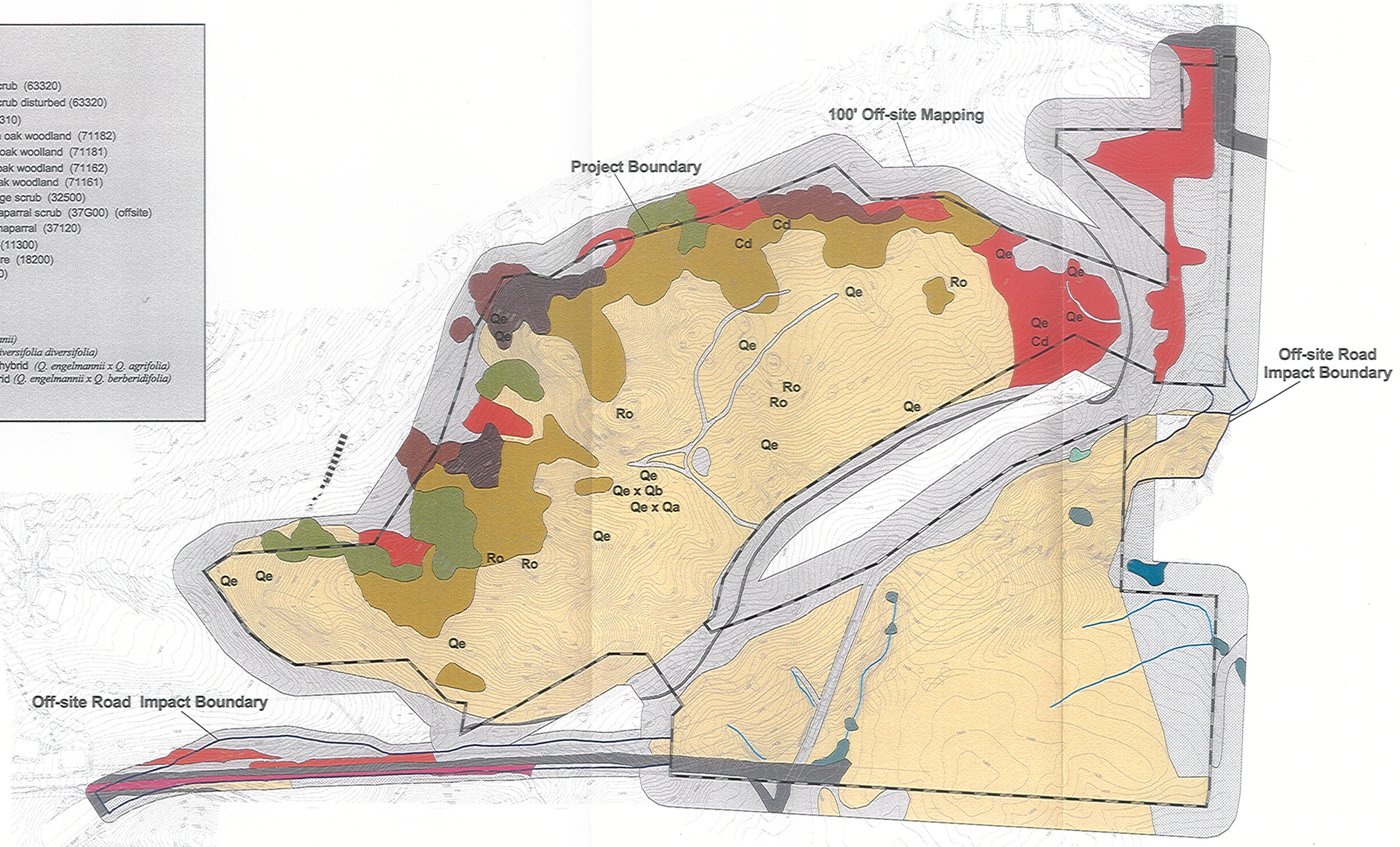
Figure 3a

LEGEND

SWS	Southern willow scrub (63320)
SWS-D	Southern willow scrub disturbed (63320)
MFS	Mulefat scrub (63310)
DEOW	Dense Englemann oak woodland (71182)
OEOW	Open Englemann oak woolland (71181)
DCLOW	Dense coast live oak woodland (71162)
OCLOW	Open coast live oak woodland (71161)
DCSS	Diegan coastal sage scrub (32500)
CSCS	Coastal sage - chaparral scrub (37G00) (offsite)
SMC	Southern mixed chaparral (37120)
DIS	Disturbed habitat (11300)
AG	Intensive agriculture (18200)
DEV	Developed (12000)
Streambed	

Sensitive Plants

Qe Engelmann oak *(Quercus engelmannii)*
Cd Summer holly *(Comarostaphylis diversifolia diversifolia)*
Qe x Qa Engelmann x coast live oak hybrid *(Q. engelmannii x Q. agrifolia)*
Qe x Qb Engelmann x scrub oak hybrid *(Q. engelmannii x Q. berberidifolia)*
Ro Rock outcrop



N

400 0 400 800 Feet

Note:
This map is based on site conditions as observed at the time of our field investigations. The information presented herein was developed by visual inspection and/or aerial photograph interpretation. Note that both site conditions and applicable regulatory requirements may change.

Job No: IHP-02 Date: 5/5/00

Vegetation and Sensitive Resources

TM 5176 ISLAND RESIDENTIAL

HELIX

Figure 3b

3.0 RESULTS OF FIELD SURVEYS AND MAPPING

3.1 VEGETATION COMMUNITIES/HABITATS

Fourteen vegetation communities/habitats plus developed areas occur on the Oak Woodlands site while 10, in addition to developed areas, are found on the Island Residential site. These are listed in Table 2 with their respective acreages and shown on Figures 3a and 3b. Descriptions of these communities are provided below in order of sensitivity.

Table 2
ON-SITE VEGETATION COMMUNITIES/HABITATS

VEGETATION COMMUNITY/HABITAT*	OAK WOODLANDS (acre[s])	ISLAND RESIDENTIAL (acre[s])
High sensitivity		
Coastal and valley freshwater marsh (52410)	0.05	
Southern arroyo willow riparian forest (61320)	4.07	
Southern coast live oak riparian forest (61310)	4.62	
Southern willow scrub (63320)	0.05	0.26
Mule fat scrub (63310)		0.05
Disturbed wetland (11200)	0.84	
Dense Engelmann oak woodland (71182)		2.28
Open Engelmann oak woodland (71181)		9.02
Dense coast live oak woodland (71162)	23.97	1.55
Open coast live oak woodland (71161)	1.69	0.91
Native grassland (42100)	0.17	
Moderate sensitivity		
Diegan coastal sage scrub (32500)	0.15	6.18
Coastal sage-chaparral scrub (37G00)	0.99	
Low sensitivity		
Southern mixed chaparral (37120)	1.09	57.84
Scrub oak chaparral (37900)	2.81	
Non-native grassland (42200)	6.43	
Other		
Disturbed habitat (11300)	5.38	7.66
Intensive agriculture (18200)		5.33
Developed (12000)	1.09	1.26
TOTAL	**53.40**	**92.34**

*Categories and codes are from Holland (1986) and Oberbauer (1996).

3.1.1 Coastal and Valley Freshwater Marsh

Freshwater marshes are areas of prolonged soil saturation by freshwater which are dominated by perennial, emergent monocots such as cattail (*Typha latifolia*) and bulrush (*Scirpus californica*).

Oak Woodlands: Two very small, freshwater marshes exist on the Oak Woodlands site, one in the east-central portion of the property and the other in the western portion of the property. Both are associated with southern arroyo willow riparian forest and support bulrush and cattail. The eastern marsh is in a depression within a patch of willow forest apparently created by a large earthen berm that traverses the drainage. The western marsh is located at the edge of the oak riparian woodland adjacent to disturbed habitat.

Island Residential: None

3.1.2 Southern Arroyo Willow Riparian Forest

This riparian forest community is dominated by an arborescent form of arroyo willows with a second canopy layer of other *Salix* species, mule fat (*Baccharis salicifolia*) and sometimes coast live oak and sycamore. It occurs in floodplains along major streams and rivers in southern California. The understory is a mixture of forbs and shrubs including nettle (*Urtica dioca*), poison oak (*Toxicodendron diversilobum*), dock (*Rumex* sp.) and other ruderal species (County of Orange 1992).

Oak Woodlands: Southern arroyo willow riparian forest is a major portion of the wetland vegetation at the Oak Woodlands site occurring east and west of the berm, and going off site to the east. Arroyo willows dominate, but Goodding's black and lance-leaf willows are present beneath the upper canopies. Watercress is present in the creek with Dombey's Spike-sedge (*Eleocharis montevidensis*) on the banks.

Island Residential: None

3.1.3 Southern Coast Live Oak Riparian Forest

Southern coast live oak riparian forests are open or dense riparian woodlands dominated by coast live oak (*Quercus agrifolia*) and often with a richer herbaceous though poorly developed shrubby understory component compared to other riparian vegetation communities.

Oak Woodlands: Coast live oak riparian forest lines the intermittent creek that runs from the southeast boundary of the Oak Woodlands property to the arroyo willow riparian forest east of the berm, but it is best developed in the eastern half of the property where it is restricted to low-lying terrain along a section of the creek and in the northwest along another drainage. In the eastern portion the forest understory is poorly developed along the creek, which may qualify as unvegetated waters of the U.S. Separation of the lowland Coast live oak riparian forest from the coast live oak woodland was not possible based on floristic indicators, rather separation of the habitats was based on contours. Oaks adjacent to the creek and within the potential flood area of the creek were considered riparian forest. Oaks growing on the slopes above the creek and flood plain were mapped as oak woodland. East of the berm, the riparian tree cover broadens in areas where the floodplain widens and the creek bed braids and meanders. A block of this vegetation in the central western portion of the site contains a few mature western sycamore (*Platanus racemosa*) and two cottonwoods (*Populus fremontii*), as well as scattered examples of several species of willow (*Salix* sp.): arroyo (*Salix lasiolepis*), Goodding's black (*Salix gooddingii*), and lance-leaf (*Salix lucida* ssp. *lasiandra*). Watercress (*Rorippa nasturtium-officinale*) grows in portions of the creek which retain water during part of the year.

Island Residential: None

3.1.4 Southern Willow Scrub

Southern willow scrub consists of winter-deciduous stands of different species of willows with emergent cottonwood and sycamores found on alluvial deposits in channels and floodplains of coastal southern California creeks and rivers.

Oak Woodlands: On the Oak Woodlands site, a few small, distinct patches of southern willow scrub are found. The patches occur adjacent to the coast live oak riparian in the western portion of the site, and also adjacent to the disturbed wetland.

Island Residential: The southern willow scrub habitat on the Island site is restricted to isolated and relatively small clusters of willow located on several seasonal drainages on the southern "non-island" portion of the site that are active primarily following rainfall. Drainage within these areas is relatively quick, with only one small area along the southern boundary providing level, ponding topography. Arroyo willow, Goodding's black willow, and lance-leaf willow constitute most of the cover in these isolated locales.

3.1.5 Mule Fat Scrub

This habitat is a depauperate, tall, herbaceous, riparian scrub dominated by mule fat. It is an early seral community maintained by frequent flooding.

Oak Woodlands: None

Island Residential: On the Island residential site, mule fat scrub is restricted to a very small patch alongside an existing dirt road running which runs along the southern side of the golf course fairway to the southeast of the "island." The vegetation includes mule fat, arroyo willow, western ragweed (*Ambrosia psilostachya*), and Bermuda grass (*Cynadon dactylon*). The surrounding vegetation to either side and to the south of it is southern mixed chaparral. The wetland species are able to persist due to irrigation run-off from the adjacent golf course.

3.1.6 Disturbed Wetland

This community is dominated by exotic species that have invaded sites that have been previously disturbed or sites that undergo periodic disturbances such that these invasive, non-natives have displaced the native wetland flora.

Oak Woodlands: Disturbed wetland occurs on the Oak Woodlands site where a pond previously existed. Some wetland species are still present including sedge (*Cyperus*) and rush (*Juncus*) species. The southern perimeter of the area was planted with ornamentals such as pyracantha and sweetgum. Some sweetgum (*Liquidamber styraciflua*) trees have invaded the adjacent oak riparian forest. This disturbed wetland occurs in the central western portion of the property.

Island Residential: None

3.1.7 Open and Dense Engelmann Oak Woodland

Holland (1986) describes open Engelmann oak woodland as Engelmann oaks growing in the ecotone between grassland and shrub fields with an understory of typical "grassland" species. Dense Engelmann oak woodland is similar in oak cover but has coast live oak trees superimposed making stem densities greater. At the Island Residential site, Engelmann oaks occur in patches with and without coast live oaks. This analysis tries to distinguish dense from open Engelmann oak woodland using this criterion, despite

the understory on site being predominantly of shrubs. Isolated Engelmann oaks are treated as specimens growing in the chaparral or coastal sage scrub and not woodland.

Oak Woodlands: None

Island Residential: Engelmann Oak Woodland occurs primarily at the northern flank of the "island" of native vegetation on the chaparral dominated Island Residential site and on the north-facing slopes of the site's two main knolls where the Engelmann oaks form a continuous canopy with arborescent scrub oaks. Unlike coast live oak woodland, the broader expanses of Engelmann oak woodland have a sage scrub understory. While isolated oaks are situated at scattered locations in the chaparral, approximately 48 oaks occur in a thin band, often only one tree wide, at the foot of the north-facing slope near the golf course fairways. The habitat quality of the woodland is typical of such upland situations in the region and may be considered good but not excellent. Many of the oaks are mid-sized, with few large specimen trees.

3.1.8 Open and Dense Coast Live Oak Woodland

Coast live oak woodland is an evergreen woodland dominated by coast live oak found predominantly on north facing slopes and shaded ravines with a poorly developed shrub understory including toyon (*Heteromeles arbutifolia*), currant (*Ribes* sp.), poison oak, and sumac (*Malosma laurina*). Open coast live oak woodland generally has gaps between trees and little to no shrub understory, whereas dense coast live oak woodland is generally a continuous cover of oaks with the aforementioned understory shrubs.

Oak Woodlands: Dense coast live oak woodland (71162) covers much of the Oak Woodlands site, bracketing the riparian forest in the east of the site, and occurring on a steep, mesic, north-facing slope which dominates the southern part of the property. The understory within the oak habitat is relatively diverse and includes scrambling vines of poison oak, creeping snowberry (*Symphoricarpos mollis*), skunkbrush (*Rhus trilobata*), San Diego honeysuckle (*Lonicera subspicata* var. *denudata*), and California blackberry (*Rubus ursinus*). Coastal woodfern (*Dryopteris arguta*) is unusually common nestled among rock outcrops. Other understory components include narrow-leaf milkweed (*Asclepias fascicularis*), caterpillar phacelia (*Phacelia ramosissima* var. *latifolia*), basket rush (*Juncus textilis*), the purple-flowered large Clarkia (*Clarkia purpurea*), and sticky cinquefoil (*Potentilla glandulosa*).

Island Residential: On the Island Residential site, open coast live oak woodland (71161) occurs at a few locations on the northern flank of the "island" area fronting the golf course fairways. Some of the woodlands have been disturbed primarily due to edge effects and disturbance associated with the golf course construction, maintenance and use. Away from the fairways, the understory within the oak habitat is sparse and includes a few scrambling vines of poison oak, as well as creeping snowberry. Because of the more complex understory and the continuous canopy cover, these were mapped as dense form of this community.

3.1.9 Valley Needlegrass Grassland

This habitat is a mid-height grassland dominated by perennial tussock-forming purple needlegrass (*Nassella pulchra*). Native and introduced annuals occur between the perennials, often exceeding the percentage cover of the bunchgrasses.

Oak Woodlands: On the Oak Woodlands site, a patch of this native grassland dominated by purple needlegrass occurs within the oak woodland in the eastern portion of the property and extends off site to the north. Only 0.17 acre occurs on site. Two Engelmann oak trees are present in this habitat with a few specimens in the immediately surrounding oak woodland.

Island Residential: None

3.1.10 Diegan Coastal Sage Scrub

Diegan coastal sage scrub is a vegetation community that is commonly characterized by drought-adapted subshrubs such as California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac, and black sage (*Salvia mellifera*).

Oak Woodlands: This habitat is very poorly represented on the Oak Woodlands property. The sides of the earth berm in the eastern-central portion of the property support narrow strips of poorly developed coastal sage scrub bisected by a trail along the top of the berm.

Island Residential: On the Island Residential site, this habitat is sparsely distributed. Flat-top buckwheat and black sage constitute much of the cover, indicating the potential transitional nature of this scrub to chaparral. Some California sagebrush is also present, and dominant in one small patch between the Engelmann oaks and the golf course on the northern side of the property. The larger two areas of coastal sage scrub are located at the eastern end of the "island" and on lands on the spur of the property at the extreme eastern edge of the golf course. Black sage is dominant in these areas. A narrow strip of coastal sage scrub, dominated by buckwheat exists on the northern flank of Hidden Meadows Lane on a slope above the golf course in the area of the future extension of Hidden Meadows Road. Quality of the habitat is considered poor given: the limited number of shrub species present; the small patch sizes on the western and central portions of the property; the lack of California sagebrush and laurel sumac (indicator species) in the eastern patches; the scattered distribution of this habitat on the site, and the general scarcity of understory annuals and herbaceous perennials.

3.1.11 Coastal Sage Chaparral Scrub

Coastal sage–chaparral scrub is a mixture of sclerophyllous chaparral shrubs and drought deciduous sage scrub species regarded as an ecotone, or transition, between the two vegetation communities. This singular community contains floristic elements of both communities including California sagebrush, California buckwheat, laurel sumac, scrub oak (*Quercus berberidifolia*), and chamise (*Adenostoma fasciculatum*).

Oak Woodlands: Approximately one acre of this community occurs between non-native grassland and the dense coast live oak woodland in the southeast of the Oak Woodlands property. While it is dominated by flat-topped buckwheat, it is transitional to southern mixed chaparral.

Island Residential: This community is found off site in a narrow band along the southern side of the existing Hidden Meadows Lane which will be widened and become part of Hidden Meadow Road .

3.1.12 Southern Mixed Chaparral

Southern mixed chaparral is composed of broad-leaved sclerophyllous shrubs such as chamise, ceanothus (*Ceanothus* sp.), and scrub oak that can grow to six to ten feet tall and form dense, often nearly impenetrable stands with poorly developed understories.

Oak Woodlands: An approximately one acre patch of this community exists on the upper slope of the hillside in the southeast of the property.

Island Residential: On the Island Residential site, a low-growing chaparral is situated both within the "island" tract and over an extensive south-facing slope in the southeastern-most portion of the property. Chamise is the dominant species with sugar bush (*Rhus ovata*), mission manzanita (*Xylococcus bicolor*), Ramona ceanothus (*Ceanothus tomentosus*), San Diego mountain-mahogany (*Cercocarpus minutiflorus*),

toyon, and our Lord's candle (*Yucca whipplei*) also present. The canopy in the chaparral is mature and in most areas has not burned in a considerable period.

Within the southern mixed chaparral on the "island" are several small areas that have a high percentage of flat-top buckwheat among the chaparral components, typically in areas that have been disturbed by human access. These areas are mapped as southern mixed chaparral rather than the ecotonal coastal sage-chaparral scrub because of the lack of indicator species unique to or predominantly found in coastal sage scrub (California sagebrush, laurel sumac).

3.1.13 Scrub Oak Chaparral

Scrub oak chaparral is a dense evergreen chaparral to 20 feet tall, dominated by scrub oak and mountain mahogany (*Cercocarpus betuloides*) found on more mesic sites up to 5,000 feet in elevation. It may also contain species such as toyon, ceanothus, and manzanita (*Arctostaphylos* sp.).

Oak Woodlands: Areas of scrub oak chaparral are present on the eastern portion of the Oak Woodlands site surrounding the disturbed area used as a dumping ground for golf course waste material and brush. Litter and refuse is strewn around the edges of this community and rock outcroppings within the chaparral. Trails go into the chaparral to illegal campsites. Many of the shrubs appear to be hybrids of scrub and Engelmann oak but their stature, physiognomy, leaf shape and color suggest they are mostly scrub oak in character and genetic composition. In oak woodland to the south honeysuckle is a common understory component at the site.

Island Residential: None

3.1.14 Non-native Grassland

Non-native grassland is dominated by non-native grass species, but can also contain native grasses as well as native and non-native forbs.

Oak Woodlands: Near the eastern boundary surrounding an area disturbed by dumping of landscaping debris and the roadside along Meadow Glenn Way East is non-native grassland with primarily Eurasian weedy species such as wild oat (*Avena barbata*) and ripgut brome (*Bromus rubens*). The grasslands tend to occur around more heavily disturbed terrain where fallow conditions have occurred for some time. One unusual component here is woolly plantain (*Plantago virginica*), a taller herb that is associated with deep clay soils.

Island Residential: None

3.1.15 Disturbed Habitat

Disturbed habitat includes land that has been cleared of vegetation (dirt roads, for example) or contains a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance.

Oak Woodlands: In the eastern portion of the site is a large area that has been used as a dumping area for landscaping materials from the golf course. Also in the eastern portion is an unpaved road which comes onto the property in the very southeast corner. Disturbed habitat exists on site adjacent to the paved section of Meadow Glen Way East and as an unpaved road where Meadow Glen Way East connects to Meadow Glen Way West. It is also found around the dwelling on the western portion of the property, as landscape dumping areas adjacent to the riparian habitat and as ornamental plantings around the disturbed wetland.

Island Residential: On the Island Residential site, the portions of the study area categorized as disturbed include the edges of the golf course; areas used for golf course maintenance operations, as well as unimproved roadways. Also included are brushed habitat alongside golf-cart drives and areas of planted turf. Eurasian weeds are well distributed within these various locations and habitat quality is poor to nil.

3.1.16 Intensive Agriculture

Oak Woodlands: None

Island Residential: In the extreme northeastern portion is an area of vegetable crops and in the southeastern portion of the Island Residential site with more row crops covering 5.33 acres in total.

3.1.17 Developed

Developed land is that where permanent structures and/or pavement have been placed, preventing the growth of vegetation.

Oak Woodlands: On the Oak Woodlands site, developed land includes the paved road and paved golf cart path and some buildings in the northwest portion of the property.

Island Residential: The only developed portions of the Island Residential site are the portion of Hidden Meadow Lane that comes onto the southern portion of the property, and the paved golf cart path which crosses the property in the east and to a much smaller degree in the southwest.

3.2 PLANT SPECIES OBSERVED ON SITE

A total of 154 plant species were observed during the vegetation mapping and general botanical surveys on the Oak Woodlands site, while 129 plant species were found on the Island Residential site. Appendices A1 and A2 provide lists of those species.

3.3 ANIMAL SPECIES OBSERVED ON SITE

A total of 41 animal species was identified/detected at the Oak Woodlands site during the general zoology surveys: one amphibian species, two reptile species, 29 bird species, and nine mammal species. Two butterfly species, three reptile species, 32 bird species, and seven mammal species were identified/detected at the Island Residential site representing a total of 44 animal species. Appendices B1 and B2 provide lists of those species. All of the animal species were identified by direct observation or by vocalizations, the presence of scat and/or tracks, or other signs.

3.4 WILDLIFE CORRIDORS

Two types of corridors can potentially occur on a site: local and regional. Local corridors allow animals access to resources such as food, water, and shelter. For example, animals can use these corridors to travel from riparian to upland habitats and back. Some animals require riparian habitat for breeding and upland habitat for burrowing. Regional corridors provide these functions and also link two or more large areas of open space. Details of local corridors on the sites are discussed below for each site.

Several factors appear to constrain the viability of any putative regional wildlife corridor through the Hidden Meadows area. East of Mountain Meadows Road, extensive residential development occurs north of the golf course, agricultural operations exist to the south and east, and steep slopes descend into Reidy Canyon to the south. West of the Oak Woodlands site, the valley drops precipitously into the valley that contains Interstate 15. These factors may already constrain the ability of wide-ranging wildlife

to move between vacant and preserved lands to the east and west of these sites. Inconsistent evidence of mule deer at the Oak Woodlands site and none on the Island Residential site suggests mule deer do not cross Mountain Meadow Road. The planned extension of Hidden Meadows Road as a 4-lane collector (a Circulation Element Road of the County General Plan) will further constrain any movement across the sites. In addition, County regional conservation planning is not looking at these sites as part of any regional wildlife corridor.

3.4.1 Oak Woodlands

The Oak Woodlands site provides a significant local corridor connecting oak woodland and chaparral habitat to the creek running through the property. The creek runs off site to the west and connects the property with undeveloped land to the west in the Merriam Mountains RCA. The creek is within the San Luis Rey River watershed. While the riparian areas have potential to act as part of a regional corridor, providing excellent cover and resources for large animals, the property ends at Mountain Meadow Road opposite a condominium complex, the country club house, parking lot and maintenance buildings. Lands to the southwest of the coast live oak woodland are also mostly vacant and connect to vacant lands on the hills above Jesmond Dene, albeit across Mountain Meadow Road, a 4-lane collector road. Inconsistent evidence of use by mule deer and none by mountain lions was observed during several field visits. Tracks of bobcat were found in the dry creek bottoms however, this species is thought to maintain local territories. Bobcat home range can be as small as 0.23 square mile (0.6 sq. km) in California (Chapman et al. 1982). The prevalence of illegal transient camps in the coast live oak woodland near the creek area may be a factor in the lack of apparent use by large mammals. The north, east, and southeast sides of the property are either developed, part of a golf course, or in agriculture. The Merriam Mountains area is likely to be a biological core area of the County's North County MSCP Plan, which is being prepared and Oak Woodlands site may append to that, despite the drop off into the Interstate 15 corridor. .

3.4.2 Island Residential

The Island Residential site's main feature is the "island" of vacant land which is surrounded by a golf course with development preventing any habitat connections to the north. The Meadow Lakes Country Club's main facilities and condominiums lie to the west of the property, as does Mountain Meadow Road which may be a barrier to animal movement to the west of Mountain Meadow Road and the Oak Woodlands project site. The greatest connectivity to surrounding habitat occurs in the south of the property with the southern spur of the site connecting directly to vacant land that lines Reidy Canyon and extends to the Escondido Daley Ranch Conservation Bank to the east. The "island" of habitat supports resident wildlife including rabbits, squirrels, rats and mice, and wider ranging species that are found in more urban settings such as coyotes and foxes, however, no evidence of mule deer or mountain lion was found on the "island" suggesting the habitat is not part of any regional corridor, rather just an area providing forage for local animals or animals coming from habitat to the south. Without any wetland or creeks on the "island" local corridors are limited. Most evidence of coyote and bobcat usage appeared to be along the dirt roads and trails. As a result its contribution to regional wildlife movement and conservation of wildlife corridors is not considered significant. The southern spur supporting southern mixed chaparral and drainages may contribute to wildlife habitat and provides connectivity to off-site vacant land that descends steeply into the northern end of Reidy Canyon. The steepness of the land may restrict movement of some species. The future extension of Hidden Meadows Road, a County General Plan Circulation Element 4-lane collector road supported by the community, will further restrict access from the "island" to the south.

4.0 SENSITIVE RESOURCES

Sensitive resources are those defined as (1) habitat areas or vegetation communities that are unique, are of relatively limited distribution, or are of particular value to wildlife and (2) species that have been given special recognition by federal, state, or local government agencies, and organizations due to limited, declining, or threatened populations.

4.1 SENSITIVE VEGETATION COMMUNITIES

The following vegetation communities on the sites are considered sensitive.

4.1.1 Oak Woodlands Site

- Coastal and valley freshwater marsh
- Southern arroyo willow riparian forest
- Coast live oak riparian forest
- Southern willow scrub
- Disturbed wetland
- Dense and open coast live oak woodland
- Native grassland
- Diegan coastal sage scrub
- Non-native grassland (raptor foraging habitat)

4.1.2 Island Residential Site

- Southern willow scrub
- Mule fat scrub
- Dense and open Engelmann oak woodland
- Dense and open coast live oak woodland
- Diegan coastal sage scrub
- Coastal sage-chaparral scrub

4.2 SENSITIVE PLANT SPECIES

No plant species considered threatened or endangered by the USFWS or CDFG was observed on the sites. Three species recognized as sensitive by the California Native Plant Society (CNPS) (Skinner and Pavlik 1994) and the County of San Diego were observed, however. These species are summer holly, Engelmann oak, and ashy spike-moss. A brief description of each species is provided below. A key for the status codes is presented in Appendix E.

Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)
Status: FSC, CNPS List 1B, R-E-D 2-2-2, CEQA, County Group A
Distribution: Below approximately 2,300 feet from the foothills to the coast in Orange and San Diego counties and south into Baja California, Mexico.
Habitat(s): Found in scattered locations on north-facing slopes and drainages in chaparral.
Status on Oak Woodlands site: A single specimen was found at the edge of the oak woodlands adjacent to the native grassland on the east of the project.
Status on the Island Residential site: Two shrubs were observed among Engelmann oaks on the northern portion of the site.

Engelmann oak (*Quercus engelmannii*)
Status: CNPS List 4, R-E-D 1-2-2, County Group D
Distribution: San Diego, Orange, Riverside Counties, Santa Catalina Island, Baja California, Mexico.
Habitat(s): Chaparral, cismontane woodland, riparian woodland, valley and foothill grasslands.
Status on Oak Woodlands site: A few individuals were observed in and around the native grassland in the eastern portion of the site.
Status on the Island Residential site: Over 50 trees were observed on the northern flank of the "island" bordering the golf fairways.

Ashy spike-moss (*Selaginella cinerascens*)
Status: CNPS List 4; R-E-D 1-2-1; County Group D
Distribution: Orange and San Diego counties and northwestern Baja California, Mexico.
Habitat(s): Flat mesas in coastal sage scrub and chaparral.
Status on Oak Woodlands site: Occasional on the periphery of the oak woodland but abundant to the west of the property.
Status on the Island Residential site: Found on site in the southern mixed chaparral.

4.3 SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

Sensitive plant species listed by the CNPS or County of San Diego with potential to occur due to suitable habitats and soils on site, and based on site vicinity, are listed in Table 3. No plant species listed by the USFWS or CDFG are expected to occur on the sites. The species are listed by status and alphabetized (by scientific name) where status is the same.

Table 3
LISTED OR SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL/COMMENTS
Ramona horkelia (*Horkelia truncata*)	CNPS List 1B R-E-D 3-1-2 County Group A	Moderate. A gabbro endemic also found on granitic soils occurring in chaparral communities. Found in Black Mountain-Lusardi area, and to east on El Cajon Mountain, in Barona Valley, and Ramona.
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	CNPS List 1B R-E-D 2-2-2 County Group A	Moderate potential to occur. Occurs in chaparral and cismontane woodland. The species has been reported in at the end of Mount Israel Road to the west of Escondido, and in the San Marcos Mountains (Reiser 1994). This species is not easily detected during blooming (June to July), and may not have been observed during plant survey if it occurred on site.
Delicate clarkia (*Clarkia delicata*)	CNPS List 2 R-E-D 1-2-1 County Group B	Low potential to occur. Found in shaded areas of chaparral and cismontane woodland, but known historical range is to east and south and does not include vicinity of project site.
Payson's jewelflower (*Caulanthus simulans*)	CNPS List 4 R-E-D 1-2-3 County Group D	Moderate potential to occur. Generally associated with chaparral or pinyon-juniper woodland. Found to north in Lilac, Monserrate, Pala, and Twin Oaks areas as well as to east below 4500 feet.

Table 3 (cont.)		
SPECIES	**STATUS***	**POTENTIAL/COMMENTS**
Peninsular spineflower (*Chorizanthe leptotheca*)	CNPS List 4 R-E-D 1-2-2 County Group D	Moderate potential to occur. Annual found in chaparral, coastal sage and coniferous forest on granitic soils. Ranges from San Bernardino County to Baja.
California adder's-tongue (*Ophioglossum californicum*)	CNPS List 4 R-E-D 1-2-2 County Group D	Moderate potential to occur. Surveys not performed during observable period of plant (after rainfall). Occurs in chaparral, grasslands, and vernal pools. Range extends from northern California counties into northwestern Baja California. Found nearby in Escondido, Valley Center (Beauchamp 1986).
San Diego County viguiera (*Viguiera laciniata*)	CNPS List 4 R-E-D 1-2-1 County Group D	Low potential to occur. A shrub that would have been observed if present.
Palomar monkeyflower (*Mimulus diffusus*)	CNPS List 4 R-E-D 1-1-1 County Group D	Low potential to occur. Found in damp, sandy, or gravelly places in chaparral or yellow pine forest from San Jacinto and Santa Ana Mountains south to Baja California, Mexico. Distribution mainly to north and east of site.

*See Appendix E.

4.4 SENSITIVE ANIMAL SPECIES

Seven sensitive animal species observed/detected on site are briefly described below. The key to the status codes is presented in Appendix E. None of these is federally listed as threatened or endangered. The species are grouped into reptiles and birds, then listed by status, and alphabetized (by scientific name) where status is the same. "Status on sites" details in which habitat the species was observed at each site. Reference to only one site means the species was only observed on that site.

4.4.1 Reptiles

San Diego horned lizard (*Phrynosoma coronatum blainvillei*)
Status: FSC, CSC, MSCP, County sensitive
Distribution: Southern California, west of the deserts, and south into northern Baja California, Mexico.
Habitat(s): Coastal sage scrub, chaparral, open oak woodlands and open coniferous forests. Important habitat components include basking sites, adequate scrub cover, areas of loose soil, and an abundance of harvester ants (*Pogonomyrmex* sp.), a primary prey item.
Status on sites: A single juvenile San Diego horned lizard was observed by Affinis biologists on the Island Residential site adjacent to a dirt trail through southern mixed chaparral.

Coastal western whiptail (*Cnemidophorus tigris multiscutatus*)
Status: No official status, but formerly federal Category 2; County sensitive animal
Distribution: Ventura County south, in cismontane California, to south-central Baja California, Mexico.
Habitat(s): Open coastal sage scrub, chaparral, and woodlands. Frequently found along the edges of dirt roads traversing its habitats. Important habitat components include open, sunny areas, shrub cover with accumulated leaf litter, and an abundance of invertebrate prey, particularly termites (*Reticulitermes* sp.).
Status on sites: Observed on sites in or at edges of areas of arid chaparral on both sites.

4.4.2 Birds

Cooper's hawk (*Accipiter cooperii*)
Status: Nesting - CSC; County sensitive animal
Distribution: Throughout the continental U.S. excluding Alaska, parts of Montana, and parts of the Dakotas. Winters south to Mexico and Honduras.
Habitat(s): In San Diego County, tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as shrublands or fields.
Status on sites: One Cooper's hawk was observed hunting in the coast live oak woodland on the Oak Woodlands site; on a separate visit, another was observed flying across the northern portion of the "island" of the Island Residential site.

White-tailed kite (*Elanus leucurus*)
Status: Nesting - CSC
Distribution: Breeds in the Pacific U.S. Winters to South America as far south as Chile.
Habitat(s): Nesting typically occurs in riparian or oak woodlands adjacent to grasslands where small mammals are hunted.
Status on sites: Observed roosting in trees along the mature riparian habitat on Oak Woodlands site.

Red-shouldered hawk (*Buteo lineatus*)
Status: County sensitive animal
Habitat(s): Found in open woodlands, grasslands and agricultural fields. Prefers mature eucalyptus stands, oak woodlands, and riparian forests.
Status on sites: Observed in riparian forest at Oak Woodlands site and oak woodlands on Island Residential site.

Turkey vulture (*Cathartes aura*)
Status: County sensitive animal
Distribution: Widespread in western states, year round in coastal California, southern Arizona, Texas and points further south.
Habitat: Usually observed soaring overhead above landscape.
Status on sites: Turkey vulture observed flying over both properties during surveys.

4.4.3 Mammals

Southern mule deer (*Odocoileus hemionus fuliginata*)
Status: MSCP, County sensitive
Distribution: Southern Riverside County (Tahquitz Valley), south on the coastal slope to the vicinity of San Quintin, Baja California, Mexico.
Habitat(s): Coastal sage scrub, riparian and montane forests, chaparral, grasslands, croplands, and open areas if there is at least some scrub cover present. Crepuscular activity and movements are along routes that provide the greatest amount of protective cover.
Status on sites: Based on scat, this species periodically occurs in low numbers within the Oak Woodlands study area, presumably hiding in daytime in heavy cover though sign of this species was not observed in the spring 2000 site visits.

4.5 SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Listed or sensitive animal species with potential to occur on site are listed in Table 4. The species are grouped into invertebrates, amphibians, reptiles, birds, and mammals, then listed by status, and alphabetized (by scientific name) where status is the same.

Table 4
LISTED OR SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

SPECIES	STATUS*	POTENTIAL/COMMENTS
INVERTEBRATES		
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE County sensitive	Very low potential to occur. A habitat assessment for this species in March and May 1999 found no host plants and no suitable habitat on either site. Some habitat was present pursuant to 2000 habitat assessment protocol. Protocol adult surveys in spring 2000 were negative. The most recent observations of the butterfly nearest these sites occurred at Lake Hodges and in Rancho Santa Fe in 1932 and 1933, respectively, and Vista in 1951. According to Mattoni et al. (1997), most extant populations are known from southern San Diego County in the vicinity of Otay Mountain and in the Temecula/Sage area of southwestern Riverside County. Due to the lack of sightings in the area and for more than 50 years, it is believed that there is virtually no probability that the Quino checkerspot butterfly occurs on these sites.
Harbison's dun skipper (*Euphyes vestris harbisoni*)	FSC MSCP narrow endemic	Moderate potential to occur. Found in riparian habitats and chaparral where perennial sources of water provide adequate habitat for the larval foodplant, San Diego sedge (*Carex spissa*). This plant species is present in the understory of the Oak Woodlands site.
VERTEBRATES		
Amphibians		
Arroyo toad (*Bufo microscaphus californicus*)	FE, CSC County sensitive	Very low potential to occur. Generally occurs in areas with open sandbars along perennial creeks or watercourses. This habitat does not occur on the sites. The creek on the Oak Woodlands site is under dense oak and willow riparian vegetation and is dry for much of the year. The source of the creek on site lies just east of the property boundary. Nearest known sites are in Boden Canyon to the southeast, and the San Luis River to the north and northeast.
Large-blotched salamander (*Ensatina eschscholtzi klauberi*)	FSC, CSC County sensitive	Very low potential to occur. Found in riparian, montane oak and coniferous woodland. Sites are outside known distribution in mountains of San Diego and Riverside counties.

Table 4 (cont.)		
SPECIES	**STATUS***	**POTENTIAL/COMMENTS**
Reptiles		
Western spadefoot toad (*Spea hammondii*)	FSC, CSC County sensitive	Low potential to occur. Southern California habitats include coastal sage scrub, chaparral, and grassland. Important habitat components include temporary pools for breeding which do not occur on the sites.
Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)	FSC, CSC, MSCP County sensitive	Low potential to occur. Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant invertebrate prey base, particularly termites (*Reticulitermes* sp.). May be present but in low numbers.
Silvery legless lizard (*Anniella nigra argentea*)	FSC, CSC, CoSD	Low potential to occur. Important habitat components include loose soil and leaf-litter, adequate soil moisture, warmth, and an abundance of invertebrate prey. Potentially occurring where conditions appropriate along primary creek of Oak Woodlands site.
Red-diamond rattlesnake (*Crotalus exsul*)	FSC, CSC County sensitive	High potential to occur, especially on Oak Woodlands site. Found in chaparral, coastal sage scrub, along creek banks, and in rock outcrops or piles of debris with a supply of burrowing rodents for prey.
Coronado Island skink (*Eumeces skiltonianus interparietalis*)	FSC, CSC County sensitive	High potential to occur. Found in open areas, sparse brush, and oak woodlands, usually under rocks, leaf litter, logs, debris, or in the shallow burrows it digs (Zeiner et al. 1988).
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	FSC, CSC County sensitive	High potential to occur. Found in coastal sage scrub, chaparral, riparian, grasslands, and agricultural fields (Zeiner et al. 1988). Prefers open habitats with friable or sandy soils, burrowing rodents for food, and enough cover to escape being preyed upon. Expected to occur on the undisturbed scrublands of the Oak Woodlands site.
Two-striped garter snake (*Thamnophis hammondii*)	FSC, CSC County sensitive	Moderate potential to occur. Found primarily along permanent creeks and streams but also around vernal pools and along intermittent streams. Occasionally found in chaparral or other habitats relatively far from permanent water.
San Diego banded gecko (*Coleonyx variegatus abbotti*)	FSC County sensitive	Moderate potential to occur. Found in chaparral and coastal sage scrub in areas with rock outcrops. Oak Woodland site provides some potential habitat, Island Residential site more, but generally prefers drier habitat than found on these sites.

Table 4 (cont.)		
SPECIES	**STATUS***	**POTENTIAL/COMMENTS**
Coastal rosy boa (*Lichanura trivirgata roseofusca*)	FSC County sensitive	High potential to occur. Found in dry, rocky brushlands and arid habitats, usually near intermittent streams but does not require permanent water. Has been observed in similar habitats nearby. Very likely to occur on the southern part of the property south of the golf course.
San Diego ringneck snake (*Diadophis punctatus similis*)	Considered sensitive by the U.S. Forest Service	Moderate potential to occur. Generally occurs in moist habitats such as oak woodlands and canyon bottoms, but is also sometimes encountered in grassland, chaparral, and coastal sage scrub. Good quality habitat exists along the primary creek on the Oak Woodlands site. Oak woodland on the Island Residential site may support a limited population.
Birds		
Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE, SE, MSCP County sensitive	Low potential to occur. Breeds within thickets of willows or other riparian understory, usually along streams, ponds or lakes, or in canyon drainage bottoms. Migrant southwestern willow flycatchers may be located among any of the larger trees or shrubs in the County of San Diego, but even migrants seem to prefer damp areas. Significant populations in County found only on Santa Margarita and San Luis Rey Rivers. Other county sightings have been at lakes and reservoirs and in the Tijuana River Valley. Could nest along the creek on Oak Woodlands site in wetter years.
Least Bell's vireo (*Vireo bellii pusillus*)	FE, SE, MSCP County sensitive	Low potential to occur. Prefers riparian woodland and is most frequent in areas that combine an understory of dense, young willows (*Salix* ssp.) or mule fat (*Baccharis salicifolia*) with a canopy of tall willows. Formerly common and widespread in California and northwestern Baja California, Mexico but now restricted to major river systems in San Diego County. Known to winter only in southern Baja California, Mexico. Riparian forest at Oak Woodlands site generally has a poorly developed understory which is not preferred by this species.
Coastal California gnatcatcher (*Polioptila californica californica*)	FT, CSC, MSCP County sensitive	Very low potential to occur. Inhabits mainly Coastal sage scrub that is limited on the sites and likely does not provide enough habitat for permanent residency. Prefers lower elevations. Protocol surveys performed in March/April 2000 were negative.

Table 4 (cont.)		
SPECIES	**STATUS***	**POTENTIAL/COMMENTS**
Golden eagle (*Aquila chrysaetos*)	CSC, MSCP County sensitive, Bald Eagle Protection Act	Very low potential to occur. Forages in grassy and open, shrubby habitats which are poorly developed on the sites. Nest most often on cliffs, less often in trees. Tend to require places of solitude and are usually found at a distance from human habitation. Golden eagles may forage in Hidden Meadows area, but it is unlikely over these specific sites.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	FSC, CSC, MSCP, County sensitive	Moderate potential to occur. Found in coastal sage scrub, where it occurs on rocky hillsides and in canyons, may also be found in open sage scrub/grassy areas of successional growth (e.g., after a fire). Found from Ventura County to northwest Baja California. Some open chaparral and sage scrub occurs on the Island Residential site and may provide habitat.
Bell's sage sparrow (*Amphispiza belli belli*)	FSC, CSC County sensitive	Moderate potential to occur on, especially on the Island Residential site. Occurs in sunny, dry stands of coastal sage scrub and chaparral.
Sharp-shinned hawk (*Accipiter striatus*)	CSC County sensitive	Low potential to occur. Would only occur during winter as a visitor.
Ferruginous hawk (*Buteo regalis*) (wintering)	FSC, CSC County sensitive	Low potential to occur. Open grasslands and agricultural fields are preferred hunting grounds. Sites provide little foraging habitat.
Loggerhead shrike (*Lanius ludovicianus*)	FSC, CSC County sensitive	Moderate potential to occur. Found in open habitats including grasslands, shrublands, and ruderal vegetation with adequate perching locations. Suitable habitat is found on the sites, especially the Island Residential site.
Yellow warbler (*Dendroica petechia brewsteri*)	CSC County sensitive	Low potential to occur. A spring and summer breeding resident in southern California. Found in riparian areas. Primarily restricted to riparian woodland and riparian scrub habitats. Tend to only be found at lower elevations.
California horned lark (*Eremophila alpestris actia*)	CSC County sensitive	Low potential to occur. Occurs in open habitats such as the grasslands and open areas found on site, but would likely have been observed if present.

Table 4 (cont.)		
SPECIES	**STATUS***	**POTENTIAL/COMMENTS**
Yellow-breasted chat (*Icteria virens*)	CSC County sensitive	Low potential to occur. Prefers brushy tangles, briars, stream thickets, riparian scrub, and riparian woodland. Breeding confined to riparian woodlands. Unlikely to use habitats along the creek on the Oak Woodlands site due to mostly open understory.
Mammals		
Stephens' kangaroo rat (*Dipodomys stephensi*)	FE, ST County sensitive	Very low potential to occur. Prefers large areas of disturbed or patchy grasslands, open coastal sage scrub. These habitats are either habitat not present or in limited supply on the sites. Sites are outside known range in San Diego County. Nearest known populations are approximately 12 miles away in Rancho Guejito, or 15 miles away at Naval Weapons Station Fallbrook.
Greater western mastiff bat (*Eumops perotis californicus*)	FSC, CDFG CSC County sensitive	Moderate potential to forage on site. Roost sites are present in the site vicinity. The species inhabits crevices in cliff faces, high buildings, trees, and tunnels. Foraging is concentrated around bodies of water but also includes coastal sage scrub, chaparral, and grassland habitats.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	FSC, CSC County sensitive	Low potential to occur. Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present. Most of sites are densely covered so presence would be limited.
San Diego desert woodrat (*Neotoma lepida intermedia*)	FSC, CSC County sensitive	Moderate potential to occur. Nests of woodrats were observed at both sites in woodlands and chaparral. Positive identification would require trapping. Generally found in chamise chaparral, oak woodland, and coastal sage scrub below 3,000 feet.
Dulzura California pocket mouse (*Chaetodipus californicus femoralis*)	FSC, CSC County sensitive	Moderate potential to occur. Found in chaparral and mule fat scrub. Chaparral occurs on both sites, mule fat scrub on the Island Residential site.
Southern grasshopper mouse (*Onychomys torridus ramona*)	FSC, CSC County sensitive	Moderate potential to occur. Can occur in all arid habitats, including coastal sage scrub and chaparral.
Townsend's western big-eared bat (*Plecotus townsendii*)	FSC, CSC County sensitive	Low potential to roost on site. Roosts in mines or caves that do not occur on site but could forage in the area, especially in more mesic habitats such as the coast live oak woodlands.

Table 4 (cont.)		
SPECIES	STATUS*	POTENTIAL/COMMENTS
Pallid bat (*Antrozous pallidus pacificus*)	FSC, CDFG CSC County sensitive	Low potential to roost on site. Roosts colonially in caves, mines, crevices, and abandoned buildings that do not occur on site but could forage in the area, as there are roost sites in the vicinity.
Long legged myotis (*Myotis volans*)	FSC County sensitive	Moderate; roosts in buildings, pockets and crevices in rock ledges. Ranges from Alaskan panhandle through western and western plain states, Baja and Western Mexico.
Ringtail (*Bassariscus astutus*)	California Fully Protected, County sensitive	Moderate potential to occur. Found in various riparian habitats and in brush stands of moist forest and shrub habitats at low to middle elevations. Strictly nocturnal.
Mountain Lion (*Felis concolor*)	California Fully protected, County sensitive	Moderate potential to occur. Widespread species, locally ranges from Mountains into foothills, rarely to coastal areas. May use portions of the project sites for hunting, however, no sign of this species and inconsistent sign of mule deer, a preferred prey species, indicates the area is unlikely to be used regularly.
American badger (*Taxidea taxus*)	County sensitive	Low potential to occur. Occurs in level, open areas in grasslands, agricultural fields, and open shrub habitats. It digs large burrows in dry, friable soils. Level habitats on the sites are limited. Sign would have been observed if present.

*See Appendix E.

4.6 REGIONAL AND REGULATORY CONTEXT

The biological resources on the project site will be assessed in terms of their local importance in light of County regulations and its regional and national importance in light of state and federal regulations. The property is outside of the County's MSCP Plan but is within the County's North County MSCP planning area where projects with impacts to coastal sage scrub and the federally threatened coastal California gnatcatcher are required to conform to the NCCP Guidelines.

4.6.1 Evaluation of Resources

The sites support a variety of indigenous southern California habitats in an area of San Diego County experiencing increasing development pressure. The importance of these habitats will be evaluated in terms of the sensitivity of the habitat and the sensitive species they support, and the role of the sites as local and regional wildlife corridors. Through this type of evaluation it can be determined whether the properties could play a role in regional conservation plans.

Sensitive species are those listed above in Sections 4.2 and 4.4, and Tables 3 and 4. These species are those recognized by the USFWS, CDFG or the County as in need of protection or consideration when development projects are designed. Sensitive habitats are those recognized by the same agencies, as well as the ACOE as in need of protection. Sensitive habitat lands are identified by the County of San Diego in the County's Resource Protection Ordinance as lands which "support unique vegetation communities, or

habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the CEQA Guidelines. Habitats considered sensitive are listed in Section 4.1.

Wildlife corridors can be local or regional in scale and may function in different ways depending on species and time of year. They represent areas where wildlife movement is concentrated due to natural or manmade constraints. Local corridors allow animals access to resources such as food, water, and shelter. Animals can use these corridors, such as hillsides and tributary drainages to main drainages, to travel among different habitats, for example, riparian and upland habitats. Some animals require riparian habitat for breeding and upland habitat for burrowing. Regional corridors provide these functions and also link two or more large areas of open space. They provide avenues for wildlife dispersal, for migration and for contact between otherwise distinct populations. NCCP Planning focuses on coastal sage scrub and conservation of connected areas to provide habitat for a suite of species that primarily use this habitat.

Neither site supports or is likely to support any species listed as threatened or endangered under the federal or state Endangered Species Acts (ESAs). While survey limitations prevented some species that may have been on the sites from being observed, the listed species considered, quino checkerspot butterfly, arroyo toad, California gnatcatcher, Stephens' kangaroo rat, least Bell's vireo, and southern willow flycatcher, have a low to very low probability of occurring on site. Protocol surveys for quino checkerspot and the California gnatcatcher were completed in spring 2000 per permitting requirements and proved negative. A few species observed are federal or state species of concern (FSC, CSC); however, their numbers are expected to be low and any impacts to be less than significant. As a result, impacts to individual species are not considered to be significant and/or can be mitigated to a level of insignificance.

Oak Woodlands

The Oak Woodlands site is dominated by a large continuous swath of coast live oak woodland and riparian forest that is contiguous with undisturbed habitat to the southwest and to vacant land in the Merriam Mountains Resource Conversation Area (RCA) to the west. The quality of the oak woodlands is very high, despite the presence of illegal transient camps, and is most likely due to the protection provided by the golf course to the north that limits casual human encroachment, the riparian area between the developed area and oak woodland, and the breadth of woodland which reduces the edge to area ratio.

Other habitats of particular note on site include the southern arroyo willow and coast live oak riparian forest that line most of the creek running through the site. Together these woodlands and riparian areas form a wildlife corridor connecting this portion of the Hidden Meadows area to the RCA to the west. The absence of consistent signs of mule deer or any mountain lion activity after repeated site visits suggest any wildlife corridors are not regional in function. The riparian and oak woodland areas extend into the Hidden Meadows community with developed and/or agricultural areas to both the north and south at the eastern end of the property and Mountain Meadows Road and the Meadow Lake Country Club directly to the east. Small, patches of coastal sage scrub (0.99 acre and 0.15 acre of coastal sage–chaparral scrub) and native grassland (0.17 acre) with a few Engelmann oaks occur on site. Much of the western and northeastern end, where development is proposed, is disturbed by dumping of materials from golf course maintenance or supports non-native grassland.

Two sensitive plant species occur on site. The aforementioned Engelmann oaks and a single summer holly occur close together on the southeastern portion of the property.

The most significant features of the site are the oak woodlands and riparian habitats which constitute a regionally significant acreage of these sensitive habitat types and connect to an RCA to the west.

Island Residential

This site is dominated by southern mixed chaparral with smaller acreages of ecotonal coastal sage scrub, Engelmann oak woodland, coast live oak woodland, southern willow scrub, mule fat scrub as well as disturbed and agricultural land. The site was designated as Critical Habitat for the coastal California gnatcatcher in 2000, however, this may have been because the site was mismapped from aerial photographs and satellite imagery as being mostly coastal sage scrub in regional planning documents. In reality, the site is mostly chaparral and does not support gnatcatchers. The most valuable resource is the Engelmann oak woodland on the northern flank of the "island" which is surrounded by the golf course. Engelmann oak woodland is an increasingly scarce, and as a result, highly sensitive habitat in San Diego County. All oak woodlands are considered sensitive habitat lands under the County RPO. Engelmann oak has received special attention in the past, due to the County recognizing it as a sensitive species. However, this species is not protected under the ESAs and is not listed as a Species of Concern by either CDFG or USFWS. In addition, its sensitivity ranking was recently downgraded by the County from Group A to Group D due to it not being rare, threatened or endangered in California or elsewhere, as required by that designation. For this reason, the isolated Engelmann oaks in the chaparral are not considered as sensitive as the Engelmann oak woodland on the site. Ashy spike-moss is also a County of San Diego Group D species and not subject to species specific mitigation.

The "island" of habitat is only directly linked to surrounding habitats to the south across golf fairways, which will likely present a barrier to some species for movement, especially during daytime. The observation of coyote and bobcat sign on the "island" indicates that these species likely traverse the fairways from the south to the "Island." The southern mixed chaparral to the south of the "island" is contiguous with what is regionally mapped as coastal sage scrub along the northern side of Reidy Canyon, and vacant lands to the south. This area is part of a larger block of habitat in the Hidden Meadows/Jesmond Dene/Reidy Canyon area that connects to the City of Escondido's Daley Ranch Conservation Bank that is again considered gnatcatcher critical habitat. . Habitat connections to the east, north and west are either obstructed or wildlife movement is impeded by agriculture, residential development, the Country Club and Mountain Meadows Road. While the "island" may provide some local function for smaller animal species, and some animal species may cross the fairways to access the "island," overall, the "island" is a bulge of habitat with suboptimal connectivity or barriers to habitat to the north, east and west that will always be subject to edge effects. As a result, its potential contribution to long-term regional conservation is not significant. Its most significant contribution is the Engelmann oak woodland habitat.

Coastal Sage Scrub

The coastal sage scrub present on both sites is of low potential value for long-term conservation. This is because:

- the coastal sage scrub patches on the sites are small in size (less than one acre at the Oak Woodlands site and less than 3.0 acres at the Island Residential site) and are not the most dense in the subregion. Larger expanses of coastal sage scrub habitat than those found on site are located to the south in Reidy Canyon and to the west on the eastern slope of Interstate 15 corridor based on regional vegetation mapping.

- According to the Population Viability Analysis for the California gnatcatcher within the MSCP Area (Mock 1992) no gnatcatchers were observed in this locale between 1985 and 1992 with the closest observations being near Dixon Lake, the San Pasqual Valley and San Marcos. Protocol gnatcatcher surveys in March and April 2000 were negative. Additionally, the sites do not support significant populations of NCCP target species.

- The Island Residential site protrudes into the developed area of Hidden Meadows with the coastal sage scrub being isolated from other patches of this habitat by development, golf course and agriculture. The Oak Woodlands coastal sage scrub is similarly isolated from other areas of sage scrub.

- The land to be developed is not located in a potential corridor between higher value areas.

Overall Site Evaluation

The Oak Woodlands site has high value in terms of regional habitat sensitivity and quality of the coast live oak woodland and riparian resources on site. These woodlands are connected to vacant land to the east and the Merriam Mountains RCA. Function as a regional wildlife corridor was not apparent due to the absence of consistent sign of indicator species. This may be due to land use constraints to wildlife movement at the eastern end of the property.

The Island Residential site supports sensitive Engelmann oak woodlands habitat and provides local habitat for some animal species (bobcat, coyotes, rabbits, raptors and other birds, small mammals, reptiles, insects) and plants but the "island" of habitat does not appear to have regional significance for wildlife movement because of the absence of evidence of indicator species. While the oak woodland habitat on site is sensitive, its relative isolation undermines its significance on a regional scale. This is reflected in the Habitat Evaluation Model assessment performed by the San Diego Association Of Governments (SANDAG 1993) which identifies the Island Residential site as having high habitat value over the central knolls and northern flank of the island and medium value on the remainder of the "island" and the southern and eastern spurs of the property. The golf course is considered developed in this model and completely surrounds the "island." The Oak Woodlands site is evaluated under this model as mostly high and very high along the creek and wooded hillside, with some small areas of medium and low habitat on northwest side corresponding to the disturbed and developed areas.

4.6.2 Regulatory Issues

Regulations that apply include the federal Endangered Species Act (FESA) and Clean Water Act, CFG Code, CEQA, and County's regulations. The CFG Code regulates species listed as threatened or endangered under the California Endangered Species Act (CESA) and impacts to rivers, streams or lakes from which plants or wildlife derive benefit under Section 1603. In addition, areas enrolled in the NCCP program but without adopted NCCP Plans, are subject to the State's NCCP Guidelines (1993, 1995, and 1997). The USFWS takes jurisdiction over species listed as threatened or endangered under the FESA, whereas discharge of fill into Waters of the U.S. are regulated by the ACOE under Section 404 of the federal Clean Water Act. The California Regional Water Quality Control Board (RWQCB) provides waivers or certifications under Section 401 of the Clean Water Act.

Due to there being coastal sage scrub that will be impacted by the project, the project proponents will need to demonstrate conformance to the NCCP Guidelines for coastal sage scrub protection. The project will also require permits pursuant to CFG Code Section 1603 for impacts to streambeds and associated habitats in the southeastern portion of the Island property and northwest portion of the Oak Woodlands property. The USFWS will require that a Habitat Loss Permit be obtained from the County of San Diego pursuant to the 4(d) rule of FESA for take of the federally threatened coastal California gnatcatcher through impacts to its coastal sage scrub habitat. Impacts to ACOE jurisdictional wetlands will require a permit under Section 404 and a waiver or certificate under Section 401 of the Clean Water Act. All jurisdictional wetland impacts must be mitigated in conformance with state and federal no net-loss standards. Mitigation for potentially significant impacts is required pursuant to CEQA for impacts to biological as well as other resources covered by the Act.

The County regulates natural resources via its Resource Protection Ordinance (RPO). Open space easements will be required to protect sensitive resources and appropriate mitigation for impacts will be required. County RPO regulations cover wetlands, sensitive plants and animals, sensitive habitats and habitats containing sensitive animals or plants. Wetland habitats are defined per the County RPO and for this project are identical to state jurisdictional wetlands pursuant to Section 1603 of the Fish and Game Code. The County RPO will also require that open space easements be placed over steep slopes and development be precluded from floodways or floodplains, wetlands, and sensitive habitats.

5.0 ANTICIPATED PROJECT IMPACTS

The following section describes potential direct and indirect impacts associated with the proposed Oak Woodlands and Island Residential projects. Impacts are described based on the plans for the project that shows grading limits. All impacts within the grading limits have been determined. Brush management impacts have been assessed assuming a 100-foot fire-clearing from potential structures and 30 feet from roads per Deer Springs Fire Protection District and County requirements.

5.1 CRITERIA FOR DETERMINING SIGNIFICANCE

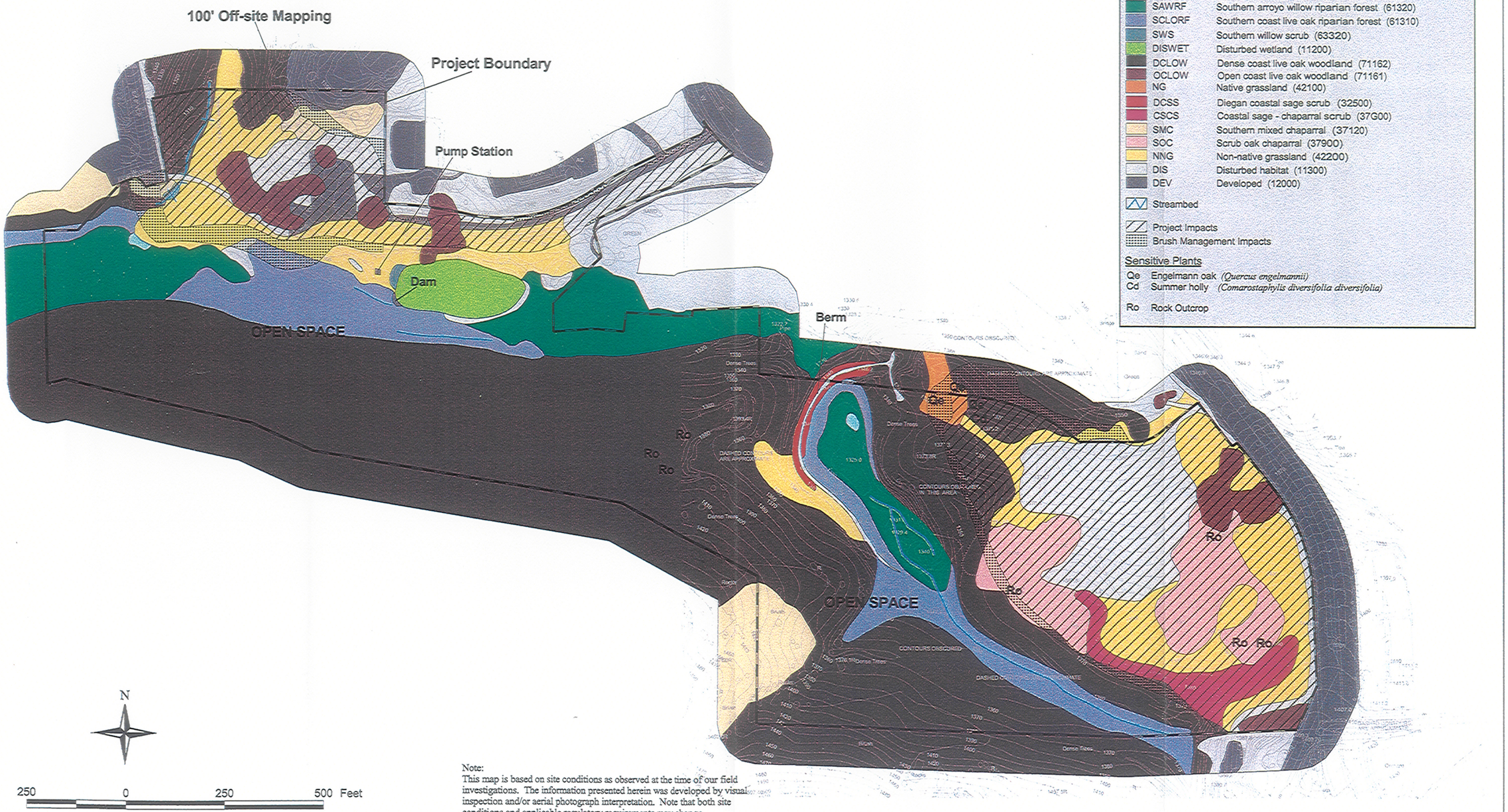
The County identifies the following potential project impacts as significant pursuant to the County's RPO:

- Disturbance of land which supports unique vegetation communities or the habitats of rare or endangered species
- Direct loss of wetlands or riparian habitat
- Disturbance to areas that support a viable population of rare and sensitive species or which serve as wildlife corridors
- Direct loss of any coastal sage scrub
- Noise levels greater than 60 dB(A) L_{eq} at the outside perimeter of gnatcatcher habitat if it would affect gnatcatcher breeding.

Further, CEQA Guidelines Section 15382 define "significant effect on the environment" as a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, water, flora, fauna, etc." The finding of significance is based on certain criteria outlined in the CEQA Guidelines, evaluation of technical data (e.g., species data and sensitivity status), and professional judgment and experience. It is important to note that the significance of an activity may vary with the setting.

In addition to the above, a significant impact was identified if the project would:

- adversely affect a state or federal listed species;
- adversely affect a County sensitive animal species or its habitat;
- adversely affect a Group A or B County sensitive plant species;
- impact raptor foraging habitat (i.e., grassland); and/or
- conflict with long-term regional or subregional conservation goals.



LEGEND

FWM	Coastal & valley freshwater marsh (52410)
SAWRF	Southern arroyo willow riparian forest (61320)
SCLORF	Southern coast live oak riparian forest (61310)
SWS	Southern willow scrub (63320)
DISWET	Disturbed wetland (11200)
DCLOW	Dense coast live oak woodland (71162)
OCLOW	Open coast live oak woodland (71161)
NG	Native grassland (42100)
DCSS	Diegan coastal sage scrub (32500)
CSCS	Coastal sage - chaparral scrub (37G00)
SMC	Southern mixed chaparral (37120)
SOC	Scrub oak chaparral (37900)
NNG	Non-native grassland (42200)
DIS	Disturbed habitat (11300)
DEV	Developed (12000)

Streambed

Project Impacts

Brush Management Impacts

Sensitive Plants

Qe Engelmann oak *(Quercus engelmannii)*
Cd Summer holly *(Comarostaphylis diversifolia diversifolia)*

Ro Rock Outcrop

Note:
This map is based on site conditions as observed at the time of our field investigations. The information presented herein was developed by visual inspection and/or aerial photograph interpretation. Note that both site conditions and applicable regulatory requirements may change.

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Vegetation and Sensitive Resources/Impacts

TM 5175 OAK WOODLANDS

HELIX

Figure 4a

LEGEND

SWS	Southern willow scrub (63320)
SWS-D	Southern willow scrub disturbed (63320)
MFS	Mulefat scrub (63310)
DEOW	Dense Englemann oak woodland (71182)
OEOW	Open Englemann oak woolland (71181)
DCLOW	Dense coast live oak woodland (71162)
OCLOW	Open coast live oak woodland (71161)
DCSS	Diegan coastal sage scrub (32500)
CSCS	Coastal sage - chaparral scrub (37G00) (offsite)
SMC	Southern mixed chaparral (37120)
DIS	Disturbed habitat (11300)
AG	Intensive agriculture (18200)
DEV	Developed (12000)

Streambed

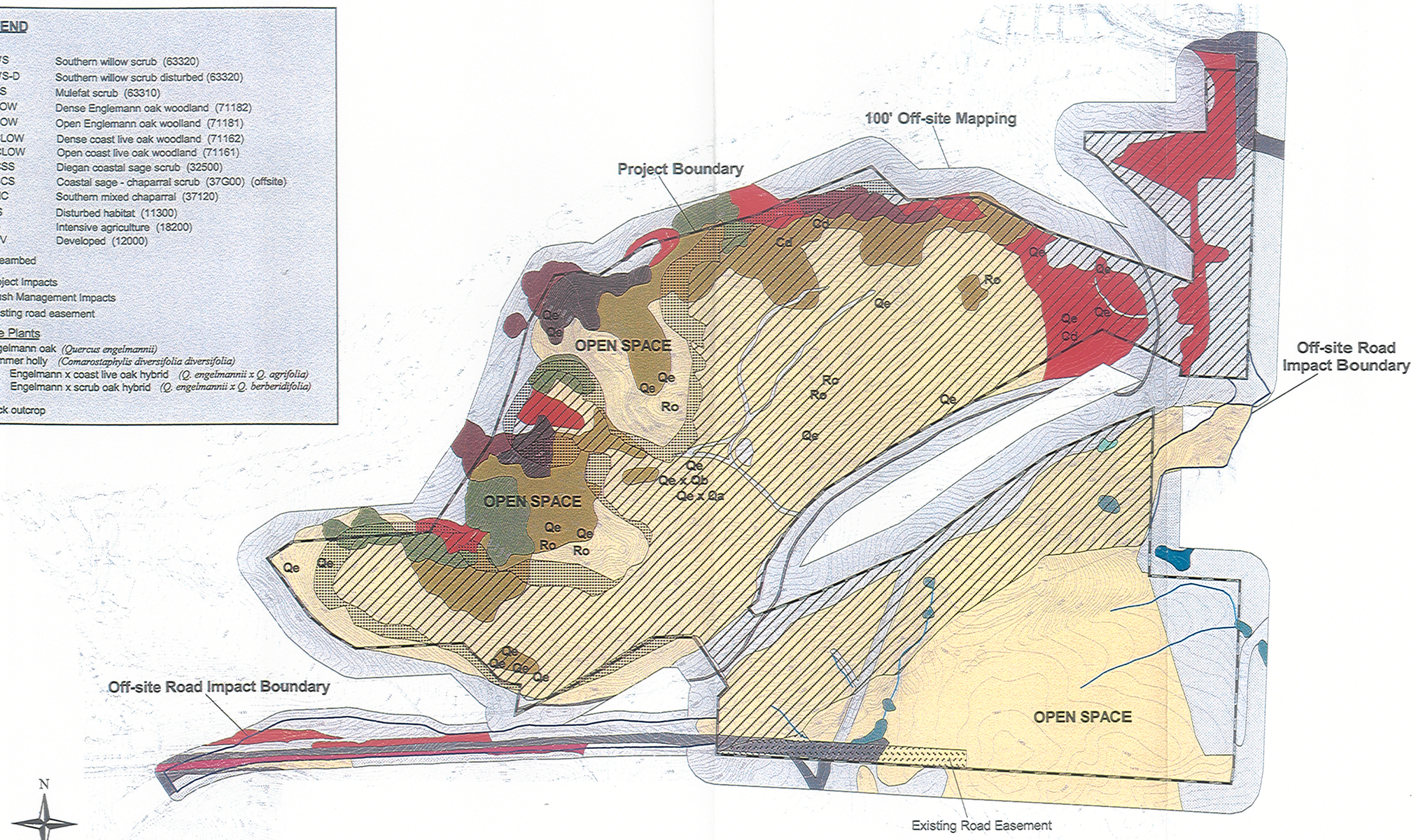
Project Impacts

Brush Management Impacts

Existing road easement

Sensitive Plants

Qe	Engelmann oak	*(Quercus engelmannii)*
Cd	Summer holly	*(Comarostaphylis diversifolia diversifolia)*
Qe x Qa	Engelmann x coast live oak hybrid	*(Q. engelmannii x Q. agrifolia)*
Qe x Qb	Engelmann x scrub oak hybrid	*(Q. engelmannii x Q. berberidifolia)*
Ro	Rock outcrop	



Note:
This map is based on site conditions as observed at the time of our field investigations. The information presented herein was developed by visual inspection and/or aerial photograph interpretation. Note that both site conditions and applicable regulatory requirements may change.

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Vegetation and Sensitive Resources/Impacts

TM 5176 ISLAND RESIDENTIAL

HELIX

Figure 4b

5.2 VEGETATION COMMUNITIES

The proposed projects would impact most of the vegetation community types on the sites to some degree (Figures 4a and 4b). Tables 5a and 5b present the acreage impacts to vegetation communities that would occur from the proposed projects as well as the acreage preserved.

5.2.1 Oak Woodlands

Based on the significance criteria, impacts to southern willow scrub, coast live oak woodland, native grassland, Diegan coastal sage scrub, and southern mixed chaparral on the Oak Woodlands site would be considered significant unless mitigated. Impacts to coast live oak woodland includes both isolated oaks on the valley floor and the oak woodland on the hillside. In addition, the County and resource agencies consider impacts to non-native grassland (not just native grassland) to be significant because of their value as raptor foraging areas. Therefore, impacts to non-native grassland would also be considered significant.

5.2.2 Island Residential

At the Island site, impacts to southern willow scrub, Engelmann oak woodland, coast live oak woodland, coastal sage scrub, coastal sage-chaparral scrub and southern mixed chaparral would be considered significant unless mitigated.

5.3 PLANT SPECIES

The proposed projects would impact three sensitive plant species: summer holly (CNPS List 1B, County Group A), Engelmann oak (CNPS List 4, County Group D) and ashy spike-moss (CNPS List 4, County Group D). The very low numbers of individuals of summer holly (one at the Oak Woodlands, three at the Islands) makes impacts to this species less than significant. These sites are at the eastern periphery of the species distribution. Ashy spike-moss is still common in San Diego County in coastal sage scrub and chaparral. Impacts from the projects to this species are not significant but impacts will be mitigated with conservation of habitat.

The few Engelmann oaks present on the Oak Woodlands site do not represent a viable population of this species because hybridization with surrounding scrub oaks apparently is preventing the Engelmann oaks from expanding their population. As a result, their contribution to the survival of the species is diminished and their loss would not be significant. The Engelmann oaks at the Island site are far greater in number and far more extensive. While some individual trees exist scattered through the southern mixed chaparral, Engelmann oaks occur in densities great enough to be considered woodland along the northern slopes of the knolls adjacent to the golf course on the northern side of the project. And while the sensitivity of this species according to County standards has recently been downgraded so that species specific mitigation is not considered necessary, the impacts of the project to Engelmann oak woodland is significant because of the sensitivity of oak woodland habitat in general under County regulations.

Table 5a
IMPACTS TO VEGETATION COMMUNITIES/HABITATS ON THE OAK WOODLANDS SITE

VEGETATION COMMUNITY/HABITAT	TOTAL ACRES ON SITE	DIRECT IMPACTS ON SITE	FIRE CLEARING IMPACTS[1]	PERCENT IMPACTED ON SITE	ACRES CONSERVED ON SITE IN OPEN SPACE	PERCENT CONSERVED ON SITE
Coastal and valley freshwater marsh (52410)	0.05			0.0	0.05	100.0
Southern arroyo willow riparian forest (61320)	4.07			0.0	4.07	100.0
Southern coast live oak riparian forest (61310)	4.62		0.16[2]	0.0	4.46	96.5
Southern willow scrub (63320)	0.05	0.02		40.0	0.03	60.0
Disturbed wetland (11200)	0.84			0.0	0.84	100.0
Dense coast live oak woodland (71162)	23.97	1.73	1.[3]	9.9	21.89	91.3
Open coast live oak woodland (71161)	1.69	1.60	0.01[3]	95.3	0.06	3.6
Native grassland	0.17	0.06	0.[4]	88.2	0.02	11.8
Diegan coastal sage scrub (32500)	0.15			0.0	0.15	100.0
Coastal sage-chaparral scrub (37G00)	0.99	0.98	0.02	100.0	0	0.0
Southern mixed chaparral (37120)	1.09	0.13	0.14	24.77	0.65	59.6
Scrub oak chaparral (37900)	2.81	2.58	0.14	96.8	0.09	3.2
Non-native grassland (42200)	6.43	4.65	0.70	80.7	1.24	19.3
Disturbed habitat (11300)	5.38	4.61	0.18	88.3	0.44[5]	8.2
Developed (12000)	1.09	0.74	0.13	76.2	0.02	1.8
[6]	**53.4**	**17.1**	**3.2**	**35.4**	**34.0**	**63.7**

[1]Includes both on- and off-site brush management impacts.
[2]Impact will be avoided due to fire-clearing variance from Deer Springs Fire Marshal.
[3]Impacts to be limited to brush understory, trees and grasslands to remain.
[4]Only subject to brush management if over 18 inches tall per County Fire Code (1999).
[5]Areas to be restored to habitat.
[6]Totals rounded to one decimal place.

Table 5b
IMPACTS TO VEGETATION COMMUNITIES/HABITATS ON THE ISLAND RESIDENTIAL SITE

VEGETATION COMMUNITY/HABITAT	TOTAL ACRES ON SITE	DIRECT IMPACTS	FIRE CLEARING IMPACTS[1]	PERCENT IMPACTED ON SITE	ACRES CONSERVED ON SITE IN OPEN SPACE	PERCENT CONSERVED ON SITE	OFF-SITE IMPACTS[2]
Southern willow scrub (63320)	0.26	0.13		50.0	0.13	50.0	
Mule fat scrub (63310)	0.05	0.05		100.0		0	
Dense Engelmann oak woodland (71182)	2.28	0.71	0.60[3]	50.4	1.13	49.6	0.16
Open Engelmann oak woodland (71181)	9.02	4.92	0.92[3]	64.8	3.18	35.6	
Dense coast live oak woodland (71162)	1.55	0.18	0.17[3]	22.6	1.20	77.4	
Open coast live oak woodland (71161)	0.91	0.49	0.21[3]	76.9	0.19	20.9	
Diegan coastal sage scrub (32500)	6.18	5.73	0.28	96.6	0.18	2.91	0.56
Coastal sage-chaparral scrub (37G00)							0.55
Southern mixed chaparral (37120)	57.84	36.44	2.90	67.22	17.50	30.3	1.56
Disturbed habitat (11300)	7.66	6.11	0.27	83.3	0.84[4]	11.0	1.63
Intensive agriculture (18200)	5.33	2.48		46.53	2.85[4]	53.5	0.36
Developed (12000)	1.26	0.63		50.0	0.02	1.6	1.09
TOTAL[5]	**92.3**	**57.9**	**5.4**	**67.8**	**27.2**	**30.6**	**5.9**

[1]Includes both on- and off-site brush management impacts.
[2]Includes impacts from off-site road improvements and off-site brush management.
[3]Impacts to be limited to brush understory; trees to remain.
[4]Areas to be restored to habitat.
[5]Totals rounded to one decimal place.

5.4 ANIMAL SPECIES

The Oak Woodlands project could impact the following sensitive species: coastal western whiptail, Cooper's hawk, red-shouldered hawk, white-tailed kite, and turkey vulture and potentially southern mule deer by direct habitat loss or by indirect impacts during the breeding season. The Island project could impact San Diego horned lizard, red-shouldered hawk and turkey vulture.

Significant impacts to active raptor nests (Cooper's hawk, white-tailed kite, red-shouldered hawk), and perhaps to other raptors such as red-tailed hawk (*Buteo jamaicensis*), could occur if active nests are removed or if construction occurs within 500 feet of the nests.

Although 15.5 percent of the coast live oak woodland on the Oak Woodlands site would be directly and indirectly impacted, preservation of 96.5 percent of the oak riparian forest, 100 percent of the arroyo willow forest, and 84.5 percent of the oak woodland means the direct impact to the raptors are not considered significant provided measures are taken to avoid impacts to active nests during construction.

5.5 POTENTIAL WETLAND IMPACTS

Relatively small impacts to County, state and federal jurisdictional wetlands will result from the development of the sites (Table 6; Figures 4a and 4b). County wetlands pursuant to RPO correspond to state jurisdictional wetlands and require only one of the three factors required for federal jurisdiction to be present. The Oak Woodlands project will impact approximately 554 linear feet of non-wetland Waters of the U.S./streambed and 0.04 acre of jurisdictional wetlands. The Island Residential project will impact approximately 301 linear feet of non-wetland Waters of the U.S./streambed and 0.19 acre of jurisdictional wetlands. The non-wetland Waters of the U.S. that will be impacted are all ephemeral creeks. Pursuant to the March 2000 Final Notice of Issuance and Modification of Nationwide (Clean Water Act) Permits, the 300 linear feet threshold for an Individual Permit does not include ephemeral streams.

Table 6
STATE AND FEDERAL WETLAND JURISDICTIONAL AREAS AND IMPACTS

HABITAT	JURISDICTIONAL ACRES			
	ACOE		CDFG[1]	
	Existing	Impacts	Existing	Impacts
OAK WOODLANDS				
Freshwater marsh	0.05	0	0.05	0
Southern Arroyo willow riparian forest	4.07	0	4.07	0
Coast live oak riparian forest			4.62	0.16[2]
Southern willow scrub	0	0	0.05	0.02
Disturbed wetland	0.84	0	0.84	0
Non-wetland waters/streambeds	†	0.02 (301 linear feet)	†	0.02 (301 linear feet)
TOTAL	**4.96**	**0.02**	**9.63**	**0.20**
ISLAND RESIDENTIAL				
Southern willow scrub	0.26	0.13	0.26	0.13
Mule fat scrub			0.05	0.05
Non-wetland waters/streambeds	†	0.01 (554 linear feet)	†	0.01 (554 linear feet)
TOTAL	**0.26**	**0.14**	**0.31**	**0.19**

†Delineation was performed for impact areas only.
[1]County RPO wetlands are equivalent to CDFG wetlands for this site.
[2]Impact will be avoided due to fire-clearing variance from Deer Springs Fire Marshal.

Under Section 404 of the Clean Water Act, the ACOE has regulatory authority over the discharge of dredged or fill materials into the waters of the United States (1344 USC). The small acreages involved and the ephemeral nature of the creeks at these sites may not necessitate individual Clean Water Act 404 permits, rather, impacts to up to 0.5 acre of jurisdictional waters or wetlands are covered by Nationwide Permit (NWP) 39 with preconstruction notification requirements. The CDFG regulates alterations of "streambeds" through the development of a Streambed Alteration Agreement pursuant to Division 2, Chapter 6, Sections 1600-1603 of the Fish and Game Code. An Agreement is required whenever a project would "divert, obstruct or change the natural flow or bed, channel or bank of any river, stream or lake designated by the Department." County wetlands, areas which are defined by any one of the three wetland characteristics which together define federal jurisdictional wetlands (hydrophytic vegetation, hydric soils, or land which is saturated or covered with water sometime during the growing season), have been avoided to the maximum extent feasible. Impacts at the Oak Woodland site would be to a non-wetland creek and potential brush management of some oak riparian forest. These impacts are primarily due to the connection of Meadow Glen Way east to Meadow Glen Way West, a road requested by the community and County, and the development of the residential lots at the west end of the project. However, a variance to the fire-clearing requirements so as to avoid impacts to the oak riparian forest has been granted by the Deer Springs Fire Marshal which reduces impacts down to those to the ephemeral creek. Impacts to wetlands at the Island Residential site are almost completely due to the construction of Hidden Meadows Road, a County Circulation Element Road. Wetland impacts will require mitigation to satisfy federal, state and County no net-loss mitigation standards.

5.6 WILDLIFE CORRIDORS

5.6.1 Oak Woodlands

Clustering of the development on predominantly disturbed habitat adjacent to developed land, and permanent protection of the coast live oak woodlands and riparian habitats on site not only will maintain the riparian-upland connections on site for local movement, but will also maintain the regional function these habitats provide. While no consistent evidence of usage by larger mammals was detected, this habitat connects the Hidden Meadows area to the vacant lands in the Merriam Mountains RCA to the west and hills above Jesmond Dene to the south (Figure 5). The development proposed for the Oak Woodlands site would not significantly affect these wildlife corridors.

5.6.2 Island Residential

The "island" of the Island Residential parcel represents an extension of habitat protruding into the Hidden Meadows residential community. While some local movement of animals clearly occurs, as evidenced by usage by coyote and bobcat, and likely occurs from the "island" to habitat to the south (Figure 5), it does not appear to function as a regional corridor for larger animals such as mule deer or mountain lions, because no evidence of these species was observed or detected during surveys. The "island" area contains no drainages, or wetland habitat, so the area's primary function will be to support species that do not migrate over long distances and do not require riparian habitat for movement or survival. The southern portion of the property will be preserved in open space, maintaining its connection with vacant land to the south. As a result, there is no impact of the Island Residential project on regional wildlife corridors. The open space on the "island" primarily serves to protect Englemann oak woodland and any resident species.

5.7 INDIRECT IMPACTS

Potential indirect impacts from project construction and/or residential development include decreased water quality, (through sedimentation, urban contaminants, or fuel release, for example), fugitive dust, colonization of non-native plant species in open space areas, edge effects, animal behavioral changes, roadkill, attraction of nuisance animal species, and night lighting.

5.7.1 Water Quality

Water quality in riparian areas can be adversely affected by potential surface runoff and sedimentation during construction. The use of petroleum products (i.e., fuels, oils, lubricants) and erosion of cleared land during construction could potentially contaminate surface water. Decreased water quality may adversely affect vegetation, aquatic animals, and terrestrial wildlife that depend upon these resources. Degraded surface water quality could be a significant impact to sensitive riparian habitat at both sites unless mitigated.

5.7.2 Fugitive Dust

Fugitive dust produced by construction could disperse onto vegetation in proposed open space areas. Effects on vegetation due to airborne dust could occur adjacent to construction. A continual cover of dust may reduce the overall vigor of individual plants by reducing their photosynthetic capabilities and increasing their susceptibility to pests or disease. In turn, this could affect animals dependent on these plants. Fugitive dust impacts to sensitive vegetation at both sites could be significant unless mitigated.

5.7.3 Non-native Plant Species

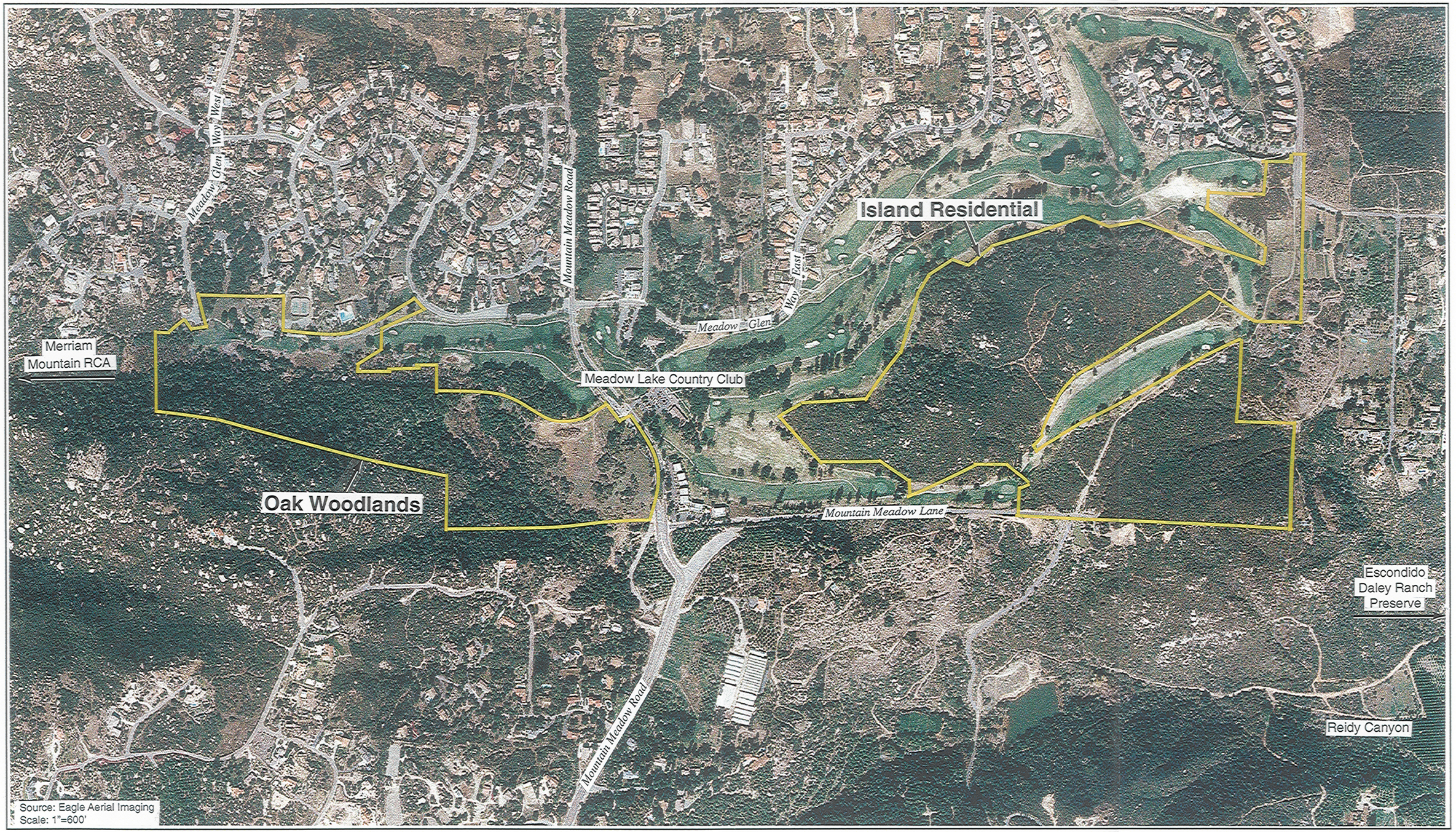
Non-native plants could colonize sites disturbed by construction and could potentially spread into adjacent native habitats, especially following a disturbance such as fire. Many of these non-native plants are highly invasive and can displace native vegetation reducing native species diversity, potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife that is dependent on the native plant species. Sweetgum (*Liquidambar styraciflua*) trees and periwinkle (*Vinca major*) have already spread into the riparian areas of the Oak Woodlands site adjacent to where these species were planted for ornamental purposes. Further colonization by non-native plant species in non-impact areas and the resulting degradation of the open space for use by native species would be considered a significant impact on both sites unless mitigation measures are taken.

5.7.4 Edge Effects

Edge effects occur when blocks of habitat are fragmented by development. These edges make it easier for non-native plant species to invade native habitats and for predators, native and non-native, to access prey that may have otherwise have been protected within large, contiguous blocks of habitat. In addition, secondary extinctions through disruption of predator-prey, parasite-host, and plant-pollinator relations can occur (Soule 1986). Edge effects can be particularly significant, for example, when nest parasites, such as the brown-headed cowbird (*Molothrus ater*), expand their population and are allowed easier access to bird nests. The Island Residential project creates a number of habitat fragments increasing the amount of edge already present due to the presence of the golf course. Significant impacts to native habitats and wildlife from edge effects could occur at this site. The clustered nature of development on the Oak Woodlands site and siting of the development adjacent to off-site development minimizes the edge effects to the maximum extent feasible. Impacts to the coast live oak woodland on the eastern portion of the property may be increased by the proposed nearby housing.

5.7.5 Human Activity

Increases in human activity in the area could result in degradation of sensitive vegetation by further fragmenting habitat and forming edges through the creation of roads and trails and removing existing vegetation. In addition, illegal dumping of lawn and garden clippings, trash, and other refuse could occur. These impacts would be considered significant at both sites if the sensitive riparian or oak woodlands are likely to be degraded and unless measures to control these activities are applied.



Aerial Photo of Project Sites and Vicinity

TM 5176 ISLAND RESIDENTIAL

Figure 5

HELIX

5.7.6 Animal Behavioral Changes

Breeding birds and mammals may temporarily or permanently leave their territories to avoid construction activity, which could lead to reduced reproductive success and increased mortality. These indirect impacts could be considered significant at the Island Residential site where impacts are greater. In addition, despite the low potential for the federally and state listed as endangered southwestern willow flycatcher and least Bell's vireo to occur on the Oak Woodlands site, the presence of potential habitat may require monitoring for these species to determine presence or absence during construction, because noise from construction work could affect these species during their breeding season (March 15 through September 15 for the vireo and May 1 through September 1 for the flycatcher). Raptors were also observed at both sites and are susceptible to disturbance from construction.

5.7.7 Roadkill

Roadkill could occur as vehicles travel on the internal roads associated with the projects. In particular the Island Residential project which creates isolated fragments of habitat on the "island." The Island project would produce over 1000 average daily trips, the Oak Woodlands project over 700. Increases in roadkill could also occur as this traffic is added to roads that lead to the project. Roadkill impact could be potentially significant if it affects state or federally listed species; however, this impact is considered unlikely, due to no listed species being found on either site. Any impacts are also considered less than significant due to the limited number of vehicle trips that the projects are likely to generate.

5.7.8 Nuisance Animal Species

The project has the potential for domesticated animals to impact native wildlife. Cats, especially, are known to hunt rodents and birds. Domestic animals could potentially significantly impact native wildlife in the immediate area. Animals inhabiting the open space areas on the "island" may be particularly susceptible. However, no listed species were observed on site, and most of the more sensitive species would not be affected by this phenomenon.

No nuisance species introduced as a result of this project are expected to affect adjacent residents.

5.7.9 Night Lighting

Night lighting on native habitats can provide nocturnal predators with an unnatural advantage over their prey. This could cause an increased loss in native wildlife that could be potentially significant, especially for any sensitive species that could occur on the sites, including the San Diego desert woodrat.

5.8 CUMULATIVE IMPACTS

The proposed projects would result in a loss of 70.5 acres of habitat including 43.4 acres of southern mixed and scrub oak chaparral, 8.1 acres of coastal sage scrub and coastal sage-chaparral scrub, and 0.39 acre of wetland. Of the impacts to 7.15 acres of Engelmann oak and 5.93 acres of coast live oak woodland, 1.52 and 1.93 acres respectively are due to brush management which will not result in the loss of mature trees. No listed species are expected to be impacted but some sensitive species would or could be impacted. The amount of habitat or numbers of sensitive species in and of themselves do not represent a significant amount or number, especially as these impacts will be mitigated to the extent required by federal and state laws, and County ordinances. In addition, provided the project conforms to the NCCP guidelines, the project's impacts to coastal sage scrub and its associated fauna and flora would not have a significant impact on future viability of these species or future NCCP preserve design. As a result, the project does not appear to have significant cumulative impacts.

5.9 IMPACT NEUTRAL AREAS

Fragments of habitat that will not be directly impacted by grading or brush management that do not contribute to mitigation are considered to be impact neutral. These areas include 0.52 acre of southern mixed chaparral at the Island Residential site.

5.10 BRUSH MANAGEMENT IMPACTS

Brush management will affect portions of the oak woodlands, however, if the trees themselves are not cleared, and the brushing is done by hand, the trees will survive and maintain some habitat function for arboreal species. Likewise, brush management impacts to grasslands do not destroy all habitat function (raptor foraging). This situation affects 1.52 acres of Engelmann oak woodland and 0.38 acre of coast live oak woodland at the Island Residential site. At the Oak Woodlands site, 1.55 acres of coast live oak woodland, 0.14 acre of native grassland, and 0.7 acre of non-native grassland would be impacted by brushing which may not affect the function of the oaks and may not even be necessary for the grasslands. Despite this, areas impacted by brush management are considered fully mitigable in this analysis for all vegetation types impacted.

6.0 PROPOSED MITIGATION MEASURES

The project would significantly impact sensitive vegetation communities/habitats and species through direct loss and could cause significant indirect impacts to them as well. Meetings between the applicant, the County, the USFWS, and CDFG on November 4, 1998 resulted in agreement that the coast live oak woodlands at the Oak Woodlands site could be used to mitigate impacts to Englemann oak woodlands at the Island Residential site if it was substantiated that the coast live oak woodlands were core habitat with excellent connectivity to habitat off site. Mitigation ratios used below are based on the approach preliminarily agreed to by the USFWS and CDFG, input from County staff, NCCP Guidelines (1993, 1995, and 1997), and past precedent. Open space easements will be placed on all biologically meaningful areas outside the grading and fire clearing impacts. The mitigation measures will be finalized through consultation with the resource agencies and the County as part of the required regulatory processes. The proposed mitigation measures are based on the additive impacts of the two projects as detailed in Table 7. Acreages of habitat to be placed in biologically meaningful open space and therefore available as mitigation is presented in Table 8.

Table 7
PROJECT IMPACTS

HABITAT	IMPACTS			
	Oak Woodlands	Island Residential	Off-site	Total
HIGH SENSITIVITY				
Southern coast live oak riparian forest	0.16[1]			1
Southern willow scrub	0.02	0.13		**0.15**
Mule fat scrub		0.05		**0.05**
Disturbed wetland				
Dense Engelmann oak woodland		1.15	0.16	**1.31**
Open Engelmann oak woodland		5.84		**5.84**
Dense coast live oak woodland	2.37	0.35	0.9	**3.62**
Open coast live oak woodland	1.61	0.70		**2.31**
Native grassland	0.15		0.05	**0.20**

Table 7 (cont.)				
HABITAT	IMPACTS			
	Oak Woodlands	Island Residential	Off-site	Total
MODERATE SENSITIVITY				
Diegan coastal sage scrub		5.97	0.56	**6.53**
Coastal sage-chaparral scrub	0.99		0.55	**1.55**
LOW SENSITIVITY				
Southern mixed chaparral	0.27	38.88	1.56	**40.71**
Scrub oak chaparral	2.72			**2.72**
Non-native grassland	5.19		0.16	**5.35**
OTHER				
Disturbed habitat	4.75	6.38	1.67	**12.80**
Intensive agriculture		2.48	0.36	**2.84**
Developed	0.83	0.63	1.13	**2.59**
TOTAL	**19.07**	**62.56**	**7.16**	**88.73**

[1]Impact will be avoided due to fire-clearing variance from Deer Springs Fire Marshal.

Table 8 SUMMARY OF HABITATS TO BE PLACED IN OPEN SPACE				
HABITAT	OPEN SPACE			
	Oak Woodlands	Island Residential	Off-site	Total
HIGH SENSITIVITY				
Freshwater marsh	0.05			0.05
Southern willow riparian forest	4.07			4.07
Southern coast live oak riparian forest	4.46			4.46
Southern willow scrub	0.03	0.13		0.16 + 0.15 created
Mule fat scrub				0.1 created/enhanced
Disturbed wetland	0.84			0.84*
Dense Engelmann oak woodland		1.13		1.13
Open Engelmann oak woodland		3.18		3.18
Dense coast live oak woodland	21.89	1.20		23.09
Open coast live oak woodland	0.06	0.19		0.25
Native grassland	0.02		0.60	0.02
MODERATE SENSITIVITY				
Diegan coastal sage scrub	0.15	0.18	6.53	6.86
Coastal sage-chaparral scrub	0		1.55	1.55
LOW SENSITIVITY				
Southern mixed chaparral	0.65	17.50		18.15
Scrub oak chaparral	0.09			0.09
Non-native grassland	1.24			1.24

Table 8 (cont.)				
HABITAT	OPEN SPACE			
	Oak Woodlands	Island Residential	Off-site	Total
HIGH SENSITIVITY				
OTHER				
Disturbed habitat	0.44	0.84		1.28*
Intensive agriculture		2.85		2.85*
Developed	0.02	0.02		0.04
TOTAL	**34.01**	**27.22**	**8.68**	**69.91 + 0.20 created**

*Areas will be restored to chaparral, non-native grassland habitat, or wetland habitats.

6.1 VEGETATION COMMUNITIES/HABITATS

Impact 6.1 *The loss of sensitive vegetation communities/habitats would be a significant, direct impact of the project. These impacts include 7.15 acres of Engelmann oak woodland, 5.93 acres of coast live oak woodland, 0.20 acre of native grassland, 8.08 acres of Diegan coastal sage scrub and coastal sage-chaparral scrub, 0.15 acre of southern willow scrub, 0.16 acre of southern coast live oak riparian forest, 0.05 acre of mule fat scrub, 40.71 acres of southern mixed and scrub oak chaparral, and 5.35 acres of non-native grassland.*

MM 6.1a Impacts to 7.15 acres of Engelmann and 5.93 acres of coast live oak woodland shall be mitigated on site in the following manner. Impacts to Engelmann oak woodland at the Island site shall be mitigated at 2:1 with 4.31 acres of Engelmann oak woodland at the Island site and 9.99 acres of coast live oak woodland at the Oak Woodland site. Impacts to 5.93 acres of coast live oak woodland shall be mitigated at 1:1 with 5.68 acres of coast live oak woodland at the Oak Woodlands site 0.25 acre at the Island Residential site. In addition to these acreages, mature trees in 1.56 acres of Engelmann oak woodland and 3.37 acres of coast live oak woodland will remain within brush management areas.

MM 6.1b Impacts to 0.15 acre of southern willow scrub and 0.05 acre of mule fat scrub from grading shall be mitigated at a 3:1 and 2:1 ratio, respectively, by wetland creation and restoration/enhancement of existing disturbed wetland habitat to meet state and federal no net-loss of wetland mitigation standards... Creation and enhancement of southern willow scrub and other wetland habitat on the sites is proposed. Brush management impacts to 0.16 acre of coast live oak riparian forest is being avoided due to a fire-clearing variance from Deer Springs Fire Marshal. This mitigation will be detailed in a conceptual upland and wetland restoration plan. Approval of such a plan would be at the discretion of the regulatory agencies.

MM 6.1c Impacts to 0.20 acre of native grassland at the Oak Woodlands site shall be mitigated at a 3:1 ratio by the on-site preservation of 0.02 acre of native grassland and the off-site acquisition of 0.6 acre of native grassland habitat in the San Vicente Conservation Bank. While 0.11 acre of native grassland should remain at the Oak Woodlands site, 0.09 acre will be subject to brush management and as a result is not used for mitigation. However, grassland under 18 inches in height does not require mowing or clearing per the County Fire Code (1999). Provided the grassland is not cleared, it will maintain some habitat function.

MM 6.1d Impacts to 8.08 acres of Diegan coastal sage scrub and coastal sage-chaparral scrub shall be mitigated at a ratio of 1:1 through the off-site acquisition and preservation of 8.1 acres of this habitat in the San Vicente Conservation Bank. Off-site mitigation is appropriate because of the small patch size and the low diversity of the coastal sage scrub on site, however, the small areas of coastal sage scrub to be preserved on site will be placed in open space easements to protect the resources in perpetuity.

MM 6.1e Impacts to 40.71 acres of southern mixed chaparral, mostly at the Island Residential site, and 2.72 acres of scrub oak chaparral at the Oak Woodland site shall be mitigated at a ratio of 0.5:1 through on-site preservation of 18.15 acres of southern mixed chaparral at both sites and restoration of 2.85 acres of land cleared for agriculture at the Island Residential site. Preserved areas will be placed in open space easements to protect the resources in perpetuity.

MM 6.1f Impacts to 5.35 acres of non-native grassland at the Oak Woodlands site shall be mitigated at a 0.5:1 ratio by the on-site preservation 1.24 acres of non-native grassland and restoration of the 1.28 acre of disturbed land within the open space easements to non-native grassland or native habitat by the removal of debris, the prevention of vegetation mowing adjacent to the golf course, or habitat restoration/creation.

MM 6.1g Temporary construction fencing shall be erected under the supervision of a qualified biologist at, or outside, the edge of preserved habitat where it interfaces with impact areas. Where impact areas are adjacent to oak woodland, fencing shall be erected outside the canopy area at a distance of 1.5 times the canopy radius of the outer trees. This fencing shall be erected prior to commencement of brushing or grading activities. The fencing will demarcate areas where human and equipment access and disturbance from grading will be prohibited. All site preparation and grading activities near these interfaces shall be monitored by a qualified biologist.

MM 6.1h Construction staging shall be restricted to impact areas only.

A summary of the habitat mitigation is shown in Table 9. The table shows that there is 19.47 acres of coast live oak woodland at the Oak Woodlands site available to mitigate for impacts to other habitat types on the two sites. Accumulating the needed mitigation indicated by the negative values in the last column of Table 9 totals 16.97 acres. Subtracting the restoration of disturbed habitat leaves a mitigation need of 16.10 acres. The 19.47 acres of coast live oak woodland covers the needed mitigation with 3.37 acres not used for mitigation and simply avoided. The table shows the conservation of habitat at both the Island and Oak Woodlands sites fully mitigates the project impacts, apart from the impacts to coastal sage scrub and native grassland for which off-site purchase will be necessary. If the unused coast live oak woodland is applied to the Engelmann oak woodland mitigation, the net mitigation ratio is nearly 2.5:1.

Table 9 SUMMARY OF IMPACTS AND MITIGATION					
HABITAT	IMPACT TOTAL	MITIGATION			
		Ratio	Required	In-kind Available	In-kind Minus Impact Total[1]
HIGH SENSITIVITY					
Southern coast live oak riparian forest	0.16[2]			4.46	
Southern willow scrub	0.15	3:1	0.30 enhance/ 0.15 create	0.16	0.30 enhance/ 0.15 create
Mule fat scrub	0.05	2:1	0.05 enhance/ 0.05 create		0.05 enhance/ 0.05 create
Disturbed wetland				0.84	0.84 potential enhancement
Dense Engelmann oak woodland	1.31	2:1	2.62	1.13	-1.49
Open Engelmann oak woodland	5.84	2:1	11.68	3.18	-8.50
Dense coast live oak woodland	3.62	1:1	3.62	23.09	19.47
Open coast live oak woodland	2.31	1:1	2.31	0.25	-2.06
Native grassland	0.20	3:1	0.60	0.60[2]	0.0
MODERATE SENSITIVITY					
Diegan coastal sage scrub	6.53	1:1	6.53	6.53[3]	0.0
Coastal sage-chaparral scrub	1.55	1:1	1.55	1.55[3]	0.0
LOW SENSITIVITY					
Southern mixed chaparral	40.71	0.5:1	20.36	18.15	-2.21
Scrub oak chaparral	2.72	0.5:1	1.86	0.09	-1.27
Non-native grassland	5.35	0.5:1	2.67	1.24	-1.44
OTHER					
Disturbed habitat	12.80	--		1.28[4]	1.28
Intensive agriculture	2.84	--		2.85[5]	
Developed	2.59	--			
TOTAL	88.73				

[1]A negative value indicates needed mitigation, a positive value is mitigation available.
[2]Impact will be avoided due to fire-clearing variance from Deer Springs Fire Marshal.
[3]Mitigation will be off site.
[4]To be restored back to non-native grassland or other native habitat.
[5]2.85 acres that were a result of unauthorized clearing of southern mixed chaparral to be restored.

6.2 PLANT SPECIES

Impact 6.2 *Significant impacts could occur to Engelmann oak.*

MM 6.2 Engelmann oak was relegated in summer 1999 from the County's Group A to Group D for plant sensitivity. Impacts to Group D species are mitigable with habitat for that species. This criterion is not applicable when the sensitive species defines the habitat. Engelmann oaks are not rare, threatened or endangered in southern California so its sensitivity has arguably more to do with it being a type of oak woodland providing woodland habitat rather than for the species. As a result, impacts to the isolated Engelmann oaks at the Island site are mitigated by on-site preservation of 4.31 acres of Engelmann oak woodland at the Island site and with the regionally significant coast live oak woodland to be conserved at the Oak Woodlands site as detailed in MM 6.1a.

6.3 ANIMAL SPECIES

Impact 6.3a *The proposed projects could significantly impact the Cooper's Hawk, white-tailed kite, red-shouldered hawk, turkey vulture, San Diego horned lizard, and coastal western whiptail, by direct habitat loss, particularly southern mixed chaparral, Diegan coastal sage scrub, oak woodland, and non-native grassland. A recent study (Richardson and Miller, 1997) also indicated that buffer zones for raptors of up to 800 meters (approximately 2,600 feet) may be appropriate for certain activities.*

MM 6.3a Impacts to these species shall be mitigated through the on-site preservation and off-site acquisition of Diegan coastal sage scrub and the on-site preservation of oak woodlands, southern mixed chaparral and non-native grassland described under Mitigation Measures 6.1a through 6.1f.

MM 6.3b A qualified biologist shall determine if any active raptor nests occur on the project sites if construction is set to commence or continue into the breeding season of raptors known in the vicinity. If active raptor nests are found, their situation shall be assessed based on topography, line of site, existing disturbances and proposed disturbance activities to determine an appropriate distance or temporal buffer, as recommended by Richardson and Miller. Construction activity shall not occur within a 500 feet of an active nest but may be modified per the aforementioned analysis. Preliminary clearing or grading shall be monitored by a qualified biologist who shall have the power to stop the activity or move it further away from any active raptor nest.

6.4 WILDLIFE CORRIDORS

Impact 6.4 *Impacts could occur to wildlife corridors, especially on the Island Residential project.*

MM 6.4 There are no impacts to significant regional wildlife corridors by the two projects and impacts to local corridors have been avoided by project design to the maximum extent feasible. Potential movement to and from the southern portion of the Island Residential site from the south will be maintained by protection of this portion of the site within an Open Space Easement. Impacts at the Oak Woodlands site will not affect the function of the riparian and oak woodland corridors along the valley bottom.

6.5 INDIRECT IMPACTS

Impact 6.5a *Degraded surface water quality could be a significant impact of the projects if sensitive riparian or oak woodland habitats are affected.*

MM 6.5a During project construction, measures shall be implemented to control erosion, sedimentation, and pollution that could impact water resources on and off site. The project will be required to comply with Sections 87.414 and 87.417 of Division 7, Excavation and Grading, of the San Diego County Zoning and Land Use Regulations which requires erosion control measures. Prior to the commencement of grading, a Notice of Intent must be filed with the State Water Resources Control Board (SWRCB) for a National Pollutant Discharge Elimination System (NDPES) General Construction Storm Water Permit. Specific permit requirements include implementation of an approved Storm Water Prevention Plan (SWPPP), which requires best management practices for erosion and sediment control related to construction activities. Standard measures which may apply to the proposed projects include:

- Surface drainage shall be designed to collect and move runoff into adequately-sized, natural stream channels or drainage structures.

- Erosion control measures associated with the project shall include techniques for both short- and long-term erosion hazards pursuant to direction by a hydrologic or engineering consultant. These are likely to include such measures as the short-term use of sandbags, matting, mulches, berms, hay bales, or similar devices along all pertinent graded areas to minimize sediment transport. The exact design, location, and schedule of use for such devices shall be determined by a hydrologic or engineering consultant.

- Native vegetation shall be preserved whenever feasible, and all disturbed areas shall be reclaimed as soon as possible after completion of grading. Native topsoil shall be stockpiled and reapplied as part of the site revegetation whenever possible.

- Use of energy dissipating structures (e.g., detention ponds, riprap, or drop structures) as deemed necessary by a hydrologic or engineering consultant shall be used at storm drain outlets, drainage crossings, and/or downstream of all culverts, pipe outlets, and brow ditches to reduce velocity and prevent erosion.

- A maintenance plan for temporary erosion control facilities shall be established. This will typically involve inspection, cleaning, and repair operations being conducted after runoff-producing rainfall.

- Removal and disposal of ground water (if any) encountered during construction activities shall be coordinated with the Regional Water Quality Control Board to ensure proper disposal methods and locations under a General Dewatering Permit. This may involve specific measures such as removing excess sediment (through the use of desilting basins, etc.) and limiting discharge velocity.

- Specified fueling and maintenance procedures shall be designated to preclude the discharge of hazardous materials used during construction (e.g., fuels, lubricants, and solvents). Such designations shall include specific measures to preclude spill including proper handling and disposal techniques.

Impact 6.5b *Fugitive dust may impact covered habitat and would be a significant impact of the projects if not mitigated.*

MM 6.5b Conformance to the requirements of the County's Grading Ordinance will control fugitive dust during construction and will reduce any impacts to below a level of significance.

Impact 6.5c *Colonization of non-native plant species caused by the projects in non-impact areas would be a significant impact.*

MM 6.5c Areas that are impacted but undeveloped (e.g., cut or fill slopes) adjacent to biological open space shall be revegetated with native species or non-invasive non-natives immediately after ground disturbance is completed. Weed control shall be provided for these areas.

Impact 6.5d *Based on the topography on the Island site, and the project design, the development creates habitat fragments with a lot of edge. Significant impacts to native habitats and wildlife from edge effects could occur. These effects result from such activities as the creation of trails and removal of existing vegetation; illegal dumping of lawn and garden clippings, trash, and other refuse, and allowing domesticated animals, especially cats, to explore open space. Residential development and the availability of water from irrigation systems encourage the invasion of Argentine ants. Irrigation water run-off into open space can introduce Argentine ants into sensitive habitat where they can displace the native ants, the prime food source of San Diego horned lizards.*

MM 6.5d The proposed Island project design results in two fragments of vegetation remaining within the project. The habitat on site is already being impacted by edge effects from the use of the golf course (forays into habitat for golf balls) and as a result of golf course maintenance (dead turf, landscape materials, tree and brush trimmings, over irrigation). The presence of residential housing is likely to increase edge effects. The prime functions of these habitat fragments is to limit impacts to already isolated patches of oak woodland and Engelmann oaks, and to provide some remaining woodland habitat for species on the "island." The impacts are mitigated by the preservation of the 21.89 acres of contiguous, fully functioning, regionally important coast live oak woodland at the Oak Woodlands site.

Fragmentation and edge effect impacts to habitat at the Oak Woodlands site are less likely due to the clustered design of the development and the use of primarily disturbed habitat for the residential lots.

To reduce edge effects on open space, preserved habitat at both sites will be posted with signage informing people of the habitat sensitivity and citing that dumping or disturbance of habitat is prohibited. Existing trails may continue to be used to provide passive recreational opportunities. Residents will be educated via the homeowner's association about restrictions on allowable use of the open space, control of domestic animals, prevention of irrigation run-off, and the need to respect the integrity of habitats on site. Open space restrictions will be disclosed to prospective buyers; in addition, to reduce already existing edge effects, existing trash and refuse at the Oak Woodlands site will be cleaned up, especially in the riparian and oak woodland areas. Illegal camp sites will be dismantled and all refuse removed. Landscaping debris at the Island Residential site will also be removed from areas in open space. This clean-up will occur prior to final mapping and a letter will be provided to the County from a qualified biologist attesting that the clean-up has occurred.

Impact 6.5e *Breeding birds and mammals may temporarily or permanently leave their territories to avoid construction activity, which could lead to reduced reproductive success and increased mortality. These indirect impacts could be considered significant.*

MM 6.5e Construction shall be limited to the areas of impact per MM 6.1g and 6.1h. Also, construction activities shall not take place within a minimum 500 feet of an active raptor nests per MM 6.3b. Trees containing active raptor nests shall not be removed until breeding is over.

Impact 6.5f *Night lighting on native habitats can provide nocturnal predators with an unnatural advantage over their prey. This could cause an increased loss in native wildlife that could be potentially significant, especially for a sensitive species.*

MM 6.5f Lighting within the development project adjacent to preserved habitat shall be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from preserved habitat to the maximum extent practicable.

7.0 CERTIFICATION/QUALIFICATION

Field work for this report was performed by AFFINIS biologists, Scott Taylor, Derek H. Langsford Ph.D., W. Larry Sward M.S., and Sally Trnka M.S. of HELIX Environmental Planning, Inc., and Guy Bruyea of Bruyea Biological Consulting Services. The report was prepared by Derek H. Langsford.

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Appendix A

PLANT SPECIES OBSERVED AT THE OAK WOODLANDS SITE

Appendix A
PLANT SPECIES OBSERVED AT THE OAK WOODLANDS SITE

SCIENTIFIC NAME	COMMON NAME	HABITAT†
CRYPTOGAMS		
Dryopteridaceae - Wood Fern Family		
Dryopteris arguta	coastal woodfern	CLOW
Selaginellaceae - Spike-moss Family		
Selaginella cinerascens	ashy spike-moss	SMC
GYMNOSPERMS		
Cupressaceae - Cypress Family		
Juniperus sp.	juniper*	DH
Calocedrus decurrens	California incense-cedar*	DH
Pinaceae - Pine Family		
Pinus sp.	pine*	DH
DICOTYLEDONS		
Aizoaceae - Carpet-weed Family		
Carpobrotus edulis	hottentot fig*	DH
Anacardiaceae - Sumac Family		
Malosma laurina	laurel sumac	SMC
Rhus ovata	sugar bush	SMC
Rhus trilobata	skunkbrush	CLOW
Toxicodendron diversilobum	western poison oak	CLOW
Apiaceae - Carrot Family		
Conium maculatum	common poison hemlock*	CLOW
Foeniculum vulgare	fennel*	DH
Apocynaceae - Dogbane Family		
Vinca major	greater periwinkle	DH*
Asclepiadaceae - Milkweed Family		
Asclepias fascicularis	narrow-leaf milkweed	CLOW
Asteraceae - Sunflower Family		
Ambrosia psilostachya	western ragweed	SAWRF
Artemisia californica	California sagebrush	CSS
Artemisia douglasiana	Mugwort	CLOW
Artemisia dracunculus	tarragon	CLOW
Baccharis pilularis	coyote brush	SMC
Baccharis salicifolia	mule fat	SCWRF
Bellis perennis	English daisy*	DH
Carduus pycnocephalus	Italian thistle*	DH

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Asteraceae - Sunflower Family (cont.)		
Centaurea melitensis	tocalote*	DH
Cirsium vulgare	bull thistle*	DH
Conyza canadensis	horseweed*	DH
Filago californica	California filago	SMC
Gnaphalium bicolor	bicolor cudweed	SMC
Gnaphalium californicum	California everlasting	SMC
Gutierrezia sarothrae	matchweed	SMC
Hazardia squarrosa ssp. *grindelioides*	saw-toothed goldenbush	SMC
Hemizonia fasciculata	fascicled tarplant	NNG
Heterotheca grandiflora	telegraph weed	DH
Hypochoeris glabra	smooth cat's-ear*	DH
Isocoma menziesii var. *menziesii*	goldenbush	SMC
Lactuca serriola	wild lettuce*	DH
Lessingia filaginifolia var. *filaginifolia*	cudweed aster	SMC
Picris echioides	bristly ox-tongue*	CLOW
Sonchus asper	prickly sow thistle*	DH
Sonchus oleraceus	common sow thistle*	DH
Stylocline gnaphalioides	everlasting nest straw	SMC
Xanthium strumarium	cocklebur*	CLOW
Boraginaceae - Borage Family		
Heliotropium curvassavicum	salt heliotrope	SAWRF
Brassicaceae - Mustard Family		
Brassica nigra	black mustard*	DH
Raphanus sativus	radish*	DH
Rorippa nasturtium-officinale	water cress*	SAWRF
Sisymbrium irio	London rocket*	DH
Cactaceae - Cactus Family		
Opuntia ficus-indica	Indian-fig*	DH
Opuntia oricola	bush prickly-pear	SMC
Caprifoliaceae - Honeysuckle Family		
Lonicera subspicata var. *denudata*	San Diego honeysuckle	CLOW
Sambucus mexicana	blue elderberry	CLOW
Symphoricarpos mollis	creeping snowberry	CLOW
Chenopodiaceae - Goosefoot Family		
Atriplex semibaccata	Australian saltbush*	DH
Atriplex triangularis	spear-scale	SAWRF
Chenopodium album	lamb's quarters*	DH
Salsola tragus	Russian thistle*	DH
Cistaceae - Rock-rose Family		
Helianthemum scoparium	peak rush-rose	SMC

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Convolvulaceae - Morning-glory Family		
Calystegia macrostegia	finger-leaf morning-glory	SMC
Cucurbitaceae - Gourd Family		
Cucurbita foetidissima	calabazilla	NNG
Marah macrocarpus var. *macrocarpus*	wild cucumber	SMC
Cuscutaceae - Dodder Family		
Cuscuta californica var. *californica*	witch's hair	SMC
Ericaceae - Heath Family		
Arctostaphylos glauca	big-berry manzanita	SMC
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	CLOW
Xylococcus bicolor	mission manzanita	SMC
Euphorbiaceae - Spurge Family		
Chamaesyce polycarpa	small-seed sandmat	SMC
Eremocarpus setigerus	doveweed	NNG
Ricinus communis	castor bean*	CLOW
Fabaceae - Pea Family		
Acacia sp.	acacia*	DH
Lotus scoparius ssp. *brevialatus*	deerweed	
Lupinus bicolor	miniature lupine	NNG
Medicago polymorpha	California burclover*	DH
Fagaceae - Oak Family		
Quercus agrifolia	coast live oak	CLOW
Quercus berberidifolia	scrub oak	SMC
Quercus engelmannii	Engelmann oak	CLOW
Geraniaceae - Geranium Family		
Erodium cicutarium	red-stem filaree*	DH
Grossulariaceae - Currant Family		
Ribes speciosum	fuchsia-flowered gooseberry	SMC
Hamamelidaceae – Witch-Hazel Family		
Liquidambar styraciflua	Sweetgum	SAWRF
Hydrophyllaceae - Waterleaf Family		
Phacelia ramosissima var. *latifolia*	caterpillar phacelia	CLOW
Lamiaceae - Mint Family		
Marrubium vulgare	horehound*	DH
Salvia apiana	white sage	SMC
Salvia mellifera	black sage	SMC

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Malvaceae - Mallow Family		
Malacothamnus fasciculatus	Mesa bush mallow, chaparral mallow	SMC
Malva parviflora	cheeseweed, little mallow*	DH
Myrtaceae - Myrtle Family		
Eucalyptus sp.	eucalyptus*	DH
Nyctaginaceae - Four O'clock Family		
Mirabilis californica	California wishbone plant	SMC
Oleaceae - Olive Family		
Fraxinus velutina	velvet ash	SAWRF
Olea europea	mission olive*	DH
Onagraceae – Evening Primrose Family		
Oenothera elata ssp. *hirsutissima*	great marsh evening primrose	SAWRF, DW
Plantaginaceae - Plantain Family		
Plantago lanceolata	English plantain*	DH
Plantago major	common plantain*	CLOW
Plantago virginica	woolly plantain*	NNG
Platanaceae - Sycamore Family		
Platanus racemosa	Western sycamore	SAWRF
Polemoniaceae - Phlox Family		
Navarretia hamata	hooked skunkweed	SMC
Polygonaceae - Buckwheat Family		
Eriogonum fasciculatum var. *foliolosum*	interior flat-top buckwheat	CSS
Polygonum arenastrum	common knotweed*	DH
Rumex conglomeratus	whorled dock*	SAWRF
Rumex crispus	curly dock*	SAWRF
Portulacaceae - Purslane Family		
Claytonia perfoliata	common miner's-lettuce	CLOW
Primulaceae - Primrose Family		
Anagallis arvensis	scarlet pimpernel*	DH
Rhamnaceae - Buckthorn Family		
Ceanothus leucodermis	chaparral whitethorn	SMC
Ceanothus tomentosus	Ramona ceanothus	SMC
Rhamnus ilicifolia	holly-leaf redberry	SMC

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Rosaceae - Rose Family		
Adenostoma fasciculatum	chamise	SMC
Cercocarpus minutiflorus	San Diego mountain-mahogany	SMC
Heteromeles arbutifolia	toyon	SMC
Prunus ilicifolia ssp. *ilicifolia*	holly-leafed cherry	SMC
Pyracantha sp.	pyracantha*	DH
Rosa californica	California rose	CLOW
Rubus ursinus	California blackberry	CLOW
Rubiaceae - Madder Family		
Galium angustifolium ssp. *angustifolium*	narrow-leaf bedstraw	SMC
Salicaceae - Willow Family		
Populus fremontii ssp. *fremontii*	Fremont cottonwood	SAWRF
Salix gooddingii	Goodding's black willow	SAWRF
Salix lasiolepis	Arroyo willow	SAWRF
Saururaceae - Lizard-tail Family		
Anemopsis californica	yerba mansa	SAWRF
Scrophulariaceae - Figwort Family		
Cordylanthus rigidus ssp. *setigerus*	dark-tip bird's-beak	SMC
Keckiella cordifolia	climbing bush penstemon	SMC
Mimulus aurantiacus	San Diego monkeyflower	SMC
Solanaceae - Nightshade Family		
Datura wrightii	Western jimsonweed	NNG
Nicotiana glauca	tree tobacco*	DH
Tamaricaceae - Tamarisk Family		
Tamarix sp.	tamarisk*	SAWRF
Ulmaceae - Elm Family		
Ulmus sp.	elm*	DH
Urticaceae - Nettle Family		
Urtica dioica ssp. *holosericea*	hoary nettle	SAWRF
Viscaceae - Mistletoe Family		
Phoradendron macrophyllum	big-leaf mistletoe	SAWRF
Vitaceae - Grape Family		
Vitis girdiana	desert wild grape	SAWRF

SCIENTIFIC NAME	COMMON NAME	HABITAT†
MONOCOTYLEDONS		
Arecaceae - Palm Family		
Phoenix canariensis	Canary Island date palm*	DH
Cyperaceae - Sedge Family		
Cyperus eragrostis	tall flatsedge	SAWRF
Eleocharis montevidensis	Dombey's spike-sedge	SAWRF
Scirpus californicus	California bulrush	FWM
Juncaceae - Rush Family		
Juncus mexicanus	Mexican rush	CLOW
Liliaceae - Lily Family		
Agave attenuata	agave*	DH
Yucca whipplei	Our Lord's candle	SMC
Poaceae - Grass Family		
Avena barbata	slender wild oat*	NNG
Bromus diandrus	ripgut grass*	NNG
Bromus hordeaceus	soft chess*	NNG
Bromus madritensis ssp. *rubens*	red brome*	NNG
Cortaderia jubata	pampas grass*	SAWRF
Cynodon dactylon	Bermuda grass*	DH
Elymus glaucus ssp. *glaucus*	blue wild rye	CLOW
Gastridium ventricosum	nit grass*	NNG
Hordeum murinum ssp. *leporinum*	hare barley*	NNG
Lamarckia aurea	golden-top*	DH
Leymus condensatus	giant wild rye	CLOW
Lolium perenne	perennial ryegrass*	NNG
Melica imperfecta	coast range melic	CLOW
Nassella lepida	foothill needlegrass	SMC, NG
Nassella pulchra	purple needlegrass	NNG, NG
Pennisetum setaceum	fountain grass*	DH
Piptatherum miliaceum	smilo grass*	DH
Poa annua	annual bluegrass*	DH
Poa pratensis ssp. *pratensis*	Kentucky bluegrass*	DH
Polypogon monspeliensis	annual beard grass*	SAWRF
Rhynchelytrum repens	natal grass*	DH
Schismus barbatus	Mediterranean schismus*	SMC
Vulpia myuros	foxtail fescue*	NNG
Typhaceae - Cattail Family		
Typha latifolia	Broad-leaved Cattail	FWM

*Denotes non-native plant taxa.

†Habitat Acronyms: SMC = Southern mixed chaparral; CSS= Inland sage scrub; NNG = Non-native grassland; NG = Native grassland; SCLORF = Southern coast live oak riparian forest; CLOW= Coast live oak woodland; DH= Ruderal/disturbed habitat; SAWRF = Southern arroyo willow riparian forest; FWM = Southern coastal and valley freshwater marsh, DW = Disturbed wetland.

Appendix B

PLANT SPECIES OBSERVED AT THE ISLAND RESIDENTIAL SITE

Appendix B
PLANT SPECIES OBSERVED AT THE ISLAND RESIDENTIAL SITE

SCIENTIFIC NAME	COMMON NAME	HABITAT†
CRYPTOGAMS		
Selaginellaceae - Spike-moss Family		
Selaginella cinerascens	ashy spike-moss	SMC
GYMNOSPERMS		
Pinaceae - Pine Family		
Pinus sp.	pine*	DH
DICOTYLEDONS		
Aizoaceae – Carpet Weed Family		
Carprobrotus edulis	Hottentot-Fig*	DH
Anacardiaceae - Sumac Family		
Malosma laurina	laurel sumac	SMC
Rhus ovata	sugar bush	SMC
Rhus trilobata	skunkbrush	EOW
Schinus molle	Peruvian pepper tree*	DH
Toxicodendron diversilobum	western poison oak	EOW
Apiaceae - Carrot Family		
Foeniculum vulgare	fennel*	DH
Asteraceae - Sunflower Family		
Ambrosia psilostachya	western ragweed	SWS
Artemisia californica	California sagebrush	CSS, CSCS
Artemisia dracunculus	tarragon	EOW
Baccharis emoryi	Emory's baccharis	SMC
Baccharis pilularis	coyote brush	SMC
Baccharis salicifolia	mule fat	SWS
Bellis perennis	English daisy*	DH
Carduus pycnocephalus	Italian thistle*	DH
Centaurea melitensis	tocalote*	DH
Cirsium vulgare	bull thistle*	DH
Conyza canadensis	horseweed*	DH
Eriophyllum confertiflorum var. *confertiflorum*	golden-yarrow	SMC
Filago californica	California filago	SMC
Gnaphalium bicolor	bicolor cudweed	SMC
Gnaphalium californicum	California everlasting	SMC
Gutierrezia sarothrae	matchweed	SMC
Hazardia squarrosa ssp. *grindelioides*	saw-toothed goldenbush	SMC
Hemizonia fasciculata	fascicled tarplant	NNG
Heterotheca grandiflora	telegraph weed	DH
Isocoma menziesii var. *menziesii*	goldenbush	SMC
Lactuca serriola	wild lettuce*	DH

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Asteraceae - Sunflower Family (cont.)		
Lessingia filaginifolia var. *filaginifolia*	cudweed aster	SMC
Picris echioides	bristly ox-tongue*	SWS
Sonchus oleraceus	common sow thistle*	DH
Stephanomeria virgata	virgate wreath-plant	SMC
Taraxacum sp.	Dandelion*	DH
Boraginaceae - Borage Family		
Amsinckia menziesii var. *intermedia*	fiddleneck	NNG
Heliotropium curvassavicum	salt heliotrope	SWS
Brassicaceae - Mustard Family		
Brassica nigra	black mustard*	DH
Lobularia maritima	sweet alyssum*	DH
Raphanus sativus	radish*	DH
Cactaceae - Cactus Family		
Opuntia littoralis	coast prickly-pear	SMC
Caprifoliaceae - Honeysuckle Family		
Lonicera subspicata var. *denudata*	San Diego honeysuckle	EOW
Sambucus mexicana	blue elderberry	EOW
Chenopodiaceae - Goosefoot Family		
Atriplex semibaccata	Australian saltbush*	DH
Chenopodium album	lamb's quarters*	DH
Salsola tragus	Russian thistle*	DH
Cistaceae - Rock-rose Family		
Helianthemum scoparium	peak rush-rose	SMC
Cucurbitaceae - Gourd Family		
Cucurbita foetidissima	calabazilla	NNG
Cuscutaceae - Dodder Family		
Cuscuta californica var. *californica*	witch's hair	SMC
Ericaceae - Heath Family		
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	CLOW
Xylococcus bicolor	mission manzanita	SMC
Euphorbiaceae - Spurge Family		
Eremocarpus setigerus	doveweed	NNG
Ricinus communis	castor bean*	EOW
Fabaceae - Pea Family		
Lotus purshianus	Spanish clover	NNG
Lotus scoparius ssp. *brevialatus*	deerweed	
Medicago polymorpha	California burclover*	DH

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Fagaceae - Oak Family		
Quercus agrifolia	coast live oak	EOW
Quercus berberidifolia	scrub oak	SMC
Quercus engelmannii	Engelmann oak	EOW
Geraniaceae - Geranium Family		
Erodium cicutarium	red-stem filaree*	DH
Grossulariaceae - Currant Family		
Ribes speciosum	fuchsia-flowered gooseberry	SMC
Hydrophyllaceae - Waterleaf Family		
Phacelia ramosissima var. *latifolia*	caterpillar phacelia	EOW
Juglandaceae – Walnut Family		
Juglans californica	walnut	SAWRF, SCLORF
Lamiaceae - Mint Family		
Marrubium vulgare	horehound*	DH
Salvia apiana	white sage	SMC
Salvia mellifera	black sage	SMC
Malvaceae - Mallow Family		
Malacothamnus fasciculatus	mesa bush mallow, chaparral mallow	SMC
Malva parviflora	cheeseweed, little mallow*	DIST
Myoporaceae – Myoporum Family		
Myoporum laetum	myoporum*	DH
Myrtaceae - Myrtle Family		
Eucalyptus sp.	eucalyptus*	DH
Nyctaginaceae - Four O'clock Family		
Mirabilis californica	California wishbone plant	SMC
Oxalidaceae		
Oxalis sp.	sorrel	DH
Plantaginaceae - Plantain Family		
Plantago lanceolata	English plantain*	DH
Plantago major	common plantain*	EOW
Polemoniaceae - Phlox Family		
Navarretia hamata	hooked skunkweed	SMC
Polygonaceae - Buckwheat Family		
Eriogonum fasciculatum var. *foliolosum*	interior flat-top buckwheat	CSS
Eriogonum gracile var. *gracile*	slender buckwheat	NNG
Rumex crispus	curly dock*	SWS

SCIENTIFIC NAME	COMMON NAME	HABITAT†
DICOTYLEDONS (cont.)		
Portulacaceae - Purslane Family		
Claytonia perfoliata	common miners-lettuce	SMC
Portulaca oleracea	common purslane*	DH
Primulaceae - Primrose Family		
Anagallis arvensis	scarlet pimpernel*	DH
Rhamnaceae - Buckthorn Family		
Ceanothus leucodermis	chaparral whitethorn	SMC
Ceanothus tomentosus	Ramona ceanothus	SMC
Rhamnus ilicifolia	holly-leaf redberry	SMC
Rosaceae - Rose Family		
Adenostoma fasciculatum	chamise	SMC
Cercocarpus minutiflorus	San Diego mountain-mahogany	SMC
Heteromeles arbutifolia	toyon	SMC
Prunus ilicifolia ssp. *ilicifolia*	holly-leafed cherry	SMC
Rubus ursinus	California blackberry	CLOW
Rubiaceae - Madder Family		
Galium angustifolium ssp. *angustifolium*	narrow-leaf bedstraw	SMC
Salicaceae - Willow Family		
Salix gooddingii	Goodding's black willow	SWS
Salix lasiolepis	arroyo willow	SWS
Scrophulariaceae - Figwort Family		
Cordylanthus rigidus ssp. *setigerus*	dark-tip bird's-beak	SMC
Mimulus aurantiacus	San Diego monkeyflower	SMC
Scrophularia californica ssp. *floribunda*	California figwort	SMC
Solanaceae - Nightshade Family		
Datura wrightii	western jimsonweed	NNG
Lycopersicon esculentum	tomato*	DH
Nicotiana glauca	tree tobacco*	DH
Solanum americanum	white nightshade*	DH
Tamaricaceae - Tamarisk Family		
Tamarix sp.	tamarisk*	SWS
Urticaceae - Nettle Family		
Urtica dioica ssp. *holosericea*	hoary nettle	SWS

Appendix B (cont.)

SCIENTIFIC NAME	COMMON NAME	HABITAT†
MONOCOTYLEDONS		
Arecaceae - Palm Family		
Phoenix canariensis	Canary Island date palm*	DH
Cyperaceae - Sedge Family		
Cyperus eragrostis	tall flatsedge	SWS
Eleocharis montevidensis	dombey's spike-sedge	SWS
Scirpus californicus	California bulrush	FWM
Juncaceae - Rush Family		
Juncus mexicanus	Mexican rush	EOW
Liliaceae - Lily Family		
Chlorogalum parviflorum	small-flower soap-plant	SMC
Yucca whipplei	Our Lord's candle	SMC
Poaceae - Grass Family		
Avena barbata	slender wild oat*	NNG
Bromus diandrus	ripgut grass*	NNG
Bromus hordeaceus	soft chess*	NNG
Bromus madritensis ssp. *rubens*	red brome*	NNG
Cortaderia jubata	pampas grass*	SWS
Cynodon dactylon	Bermuda grass*	DH
Gastridium ventricosum	nit grass*	NNG
Hordeum murinum ssp. *leporinum*	hare barley*	NNG
Lamarckia aurea	golden-top*	DH
Leymus condensatus	giant wild rye	EOW
Lolium perenne	perennial ryegrass*	NNG
Melica imperfecta	coast range melic	EOW
Nassella lepida	foothill needlegrass	SMC
Nassella pulchra	purple needlegrass	NNG
Pennisetum setaceum	fountain grass*	DH
Poa annua	annual bluegrass*	DH
Poa pratensis ssp. *pratensis*	Kentucky bluegrass*	DH
Polypogon monspeliensis	annual beard grass*	SWS
Schismus barbatus	Mediterranean schismus*	SMC
Vulpia myuros	foxtail fescue*	NNG
Typhaceae - Cattail Family		
Typha latifolia	broad-leaved cattail	FWM

*Denotes non-native plant taxa.

†Habitat Acronyms: SMC = Southern mixed chaparral; CSS = Inland sage scrub; CSCS = Coastal sage-chaparral scrub; NNG = Non-native grassland; EOW = Dense Engelmann oak woodland; DH = Ruderal/disturbed habitat/golf course; SWS = Southern willow scrub; FWM = Southern coastal and valley freshwater marsh.

Appendix C

ANIMAL SPECIES OBSERVED OR DETECTED AT THE OAK WOODLANDS SITE

Appendix C
ANIMAL SPECIES OBSERVED OR DETECTED AT THE OAK WOODLANDS SITE

SCIENTIFIC NAME	COMMON NAME	HABITAT†
AMPHIBIANS		
Hylidae – Treefrogs and Allies		
Hyla regilla	Pacific treefrog	CLOW
REPTILES		
Phrynosomatidae		
Sceloporus occidentalis	western fence lizard	SMC
Teiidae - Whiptails and Relatives		
Cnemidophorus tigris multiscutatus	coastal whiptail	SMC
BIRDS		
Cathartidae - American Vultures		
Cathartes aura	turkey vulture	
Accipitridae - Hawks, Old World Vultures, and Harriers		
Elanus leucurus	white-tailed kite	SAWRF, SCLORF
Accipiter cooperii	Cooper's hawk	SAWRF, SCLORF
Buteo lineatus	red-shouldered hawk	SCLORF
Buteo jamaicensis	red-tailed hawk	NNG
Phasianidae - Quails, Pheasants, and Relatives		
Callipepla californica	California quail	SMC
Columbidae - Pigeons and Doves		
Zenaida macroura	mourning dove	SCLORF
Trochilidae - Hummingbirds		
Calypte anna	Anna's hummingbird	CLOW
Picidae - Woodpeckers and Wrynecks		
Melanerpes formicivorous	acorn woodpecker	CLOW
Picoides nuttallii	Nuttall's woodpecker	CLOW
Colaptes auratus	northern flicker	CLOW
Tyrannidae - Tyrant Flycatchers		
Sayornis nigricans	black phoebe	SAWRF
Corvidae - Jays, Magpies, and Crows		
Aphelocoma coerulescens	scrub jay	SMC
Corvus brachyrhynchos	American crow	CLOW
Corvus corax	common raven	CLOW

Appendix C (cont.)

SCIENTIFIC NAME	COMMON NAME	HABITAT†
BIRDS (cont.)		
Paridae - Titmice		
Bacolophus inornatus	oak titmouse	SCLORF
Aegithalidae - Bushtit		
Psaltriparus minimus	bushtit	SMC
Troglodytidae - Wrens		
Thryomanes bewickii	Bewick's wren	SMC
Muscicapidae - Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrentit		
Catharus guttatus	hermit thrush	CLOW
Chamaea fasciata	wrentit	SMC
Polioptila caerulea	blue-gray gnatcatcher	SCLORF
Mimidae - Mockingbirds and Thrashers		
Mimus polyglottos	northern mockingbird	DH
Toxostoma redivivum	California thrasher	SMC
Emberizidae - Warblers, Sparrows, Blackbirds and Relatives		
Dendroica coronata	yellow-rumped warbler	SAWRF
Pipilo maculatus	spotted towhee	SMC
Pipilo crissalis	California towhee	CLOW
Zonotrichia leucophrys	white-crowned sparrow	SMC
Fringillidae - Finches		
Carpodacus mexicanus	house finch	CLOW
Carduelis psaltria	lesser goldfinch	SWS
MAMMALS		
Leporidae - Rabbits and Hares		
Sylvilagus audubonii	desert cottontail	SMC
Sciuridae - Squirrels, Chipmunks, and Marmots		
Spermophilus beecheyi	California ground squirrel	DH
Geomyidae - Pocket Gophers		
Thomomys bottae	Botta's pocket gopher	NNG
Muridae - Rats, Mice, and Voles		
Neotoma sp.	woodrat	CLOW, SMC
Microtus californicus	California vole	NNG
Felidae - Cats		
Lynx rufus	bobcat	SMC

SCIENTIFIC NAME	COMMON NAME	HABITAT†
MAMMALS (cont.)		
Canidae - Foxes, Wolves, and Relatives		
Canis latrans	coyote	SMC
Cervidae – Elk, Moose, Caribou and Deer		
Odocoileus hemionus fuliginata	southern mule deer	CLOW
Procyonidae - Raccoons and Relatives		
Procyon lotor	raccoon	CLOW

†Habitat Acronyms: SMC = Southern mixed chaparral; CSS= Inland sage scrub; NGG = Non-native grassland; SCLORF = Southern coast live oak riparian forest; CLOW= Coast live oak woodland; DH= Ruderal/disturbed habitat; SWS = Southern willow scrub; SAWRF = Southern arroyo-willow riparian forest; FWM = Southern coastal and valley freshwater marsh.

Appendix D

ANIMAL SPECIES OBSERVED OR DETECTED AT THE ISLAND RESIDENTIAL SITE

Appendix D
ANIMALS SPECIES OBSERVED OR DETECTED AT THE ISLAND RESIDENTIAL SITE

SCIENTIFIC NAME	COMMON NAME	HABITAT†
BUTTERFLIES		
Heliconiidae – Long Wing Butterflies		
Agraulis vanillae incarnata	Gulf fritillary	SMC
Pieridae		
Pontia protodice	common white	DH
REPTILES		
Phrynosomatidae - Lizards		
Phrynosoma coronatum blainvillei	San Diego horned lizard	SMC
Uta stansburiana	side-blotched lizard	SMC
Teiidae - Whiptails and Relatives		
Cnemidophorus tigris multiscutatus	coastal whiptail	SMC
BIRDS		
Cathartidae - American Vultures		
Cathartes aura	turkey vulture	
Accipitridae - Hawks, Old World Vultures, and Harriers		
Accipiter cooperii	Cooper's hawk	EOW
Buteo lineatus	red-shouldered hawk	EOW
Buteo jamaicensis	red-tailed hawk	NNG
Phasianidae - Quails, Pheasants, and Relatives		
Callipepla californica	California quail	SMC
Columbidae - Pigeons and Doves		
Zenaida macroura	mourning dove	EOW
Trochilidae - Hummingbirds		
Calypte anna	Anna's hummingbird	EOW
Picidae - Woodpeckers and Wrynecks		
Melanerpes formicivorous	acorn woodpecker	EOW
Picoides nuttallii	Nuttall's woodpecker	EOW
Colaptes auratus	northern flicker	EOW
Tyrannidae - Tyrant Flycatchers		
Sayornis nigricans	black phoebe	SWS
Sayornis saya	say's phoebe	NNG
Tyrannus vociferans	Cassin's kingbird	EOW

SCIENTIFIC NAME	COMMON NAME	HABITAT†
BIRDS (cont.)		
Corvidae - Jays, Magpies, and Crows		
Aphelocoma coerulescens	scrub jay	SMC
Corvus brachyrhynchos	American crow	EOW
Corvus corax	common raven	EOW
Paridae - Titmice		
Bacolophus inornatus	oak titmouse	EOW
Aegithalidae - Bushtit		
Psaltriparus minimus	bushtit	SMC
Troglodytidae - Wrens		
Thryomanes bewickii	Bewick's wren	SMC
Muscicapidae - Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrentit		
Chamaea fasciata	wrentit	SMC
Regulus calendula	ruby-crowned kinglet	CLOW
Mimidae - Mockingbirds and Thrashers		
Mimus polyglottos	northern mockingbird	DH
Toxostoma redivivum	California thrasher	SMC
Sturnidae - Starlings		
Sturnus vulgaris	European starling	DH
Emberizidae - Warblers, Sparrows, Blackbirds and Relatives		
Dendroica coronata	yellow-rumped warbler	SWS
Geothlypis trichas	common yellowthroat	SWS
Junco hyemalis	dark-eyed junco	SMC
Pipilo maculatus	spotted towhee	SMC
Pipilo crissalis	California towhee	EOW
Zonotrichia leucophrys	white-crowned sparrow	SMC
Fringillidae - Finches		
Carpodacus mexicanus	house finch	EOW
Carduelis psaltria	lesser goldfinch	SWS
MAMMALS		
Leporidae - Rabbits and Hares		
Sylvilagus audubonii	desert cottontail	SMC
Sciuridae - Squirrels, Chipmunks, and Marmots		
Spermophilus beecheyi	California ground squirrel	DH

Appendix D (cont.)

SCIENTIFIC NAME	COMMON NAME	HABITAT†
MAMMALS (cont.)		
Geomyidae - Pocket Gophers		
Thomomys bottae	Botta's pocket gopher	NNG
Heteromyidae - Pocket Mice and Kangaroo Rats		
Dipodomys agilis	Pacific kangaroo rat	SMC
Muridae - Rats, Mice, and Voles		
Neotoma sp.	woodrat	EOW, SMC
Felidae - Cats		
Lynx rufus	bobcat	SMC
Canidae - Foxes, Wolves, and Relatives		
Canis latrans	coyote	SMC

†Habitat Acronyms: SMC = Southern mixed chaparral; CSS = Coastal sage scrub; NNG = Non-native grassland; EOW = Engelmann oak woodland; DH = Ruderal/disturbed habitat; SWS = Southern willow scrub.

Appendix E

EXPLANATION OF STATUS CODES FOR PLANTS AND ANIMALS

Appendix E
EXPLANATION OF STATUS CODES FOR PLANTS AND ANIMALS

U.S. FISH AND WILDLIFE SERVICE (USFWS)

FE = Federal-listed endangered
FT = Federal-listed threatened
FSC = Federal Species of Concern

MIGRATORY BIRD TREATY ACT

This law is enforced as a result of local laws governing impacts to sensitive resources. For the unincorporated portion of San Diego County, the County of San Diego Resource Protection Ordinance protects "sensitive habitat lands" which includes species identified under Section 15380 of CEQA. The County's list of sensitive animal species includes most birds protected by the Migratory Bird treaty Act.

CALIFORNIA DEPARTMENT OF FISH AND GAME (CDFG)

CE = State-listed endangered
CR = State-listed rare
CT = State-listed threatened
CSC = Species of special concern
California Fully Protected Protected from take or handling by California Fish and Game Code
Special Animal = Refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status.

MULTIPLE SPECIES CONSERVATION PROGRAM (MSCP)

MSCP = Multiple Species Conservation covered species for which City and County have take authorization within MSCP area.

COUNTY OF SAN DIEGO

County plant sensitivity codes:

Group A	Plants rare, threatened or endangered in California or elsewhere
Group B	Plants rare, threatened or endangered in California but more common elsewhere
Group C	Plants which may be quite rare, but more information is needed to determine rarity status
Group D	Plants of limited distribution and are uncommon, but not presently rare or endangered

County sensitive animals considered under California Environmental Quality Act (CEQA) review of projects.

CALIFORNIA NATIVE PLANT SOCIETY (CNPS)

LISTS

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, and/or taxonomic information needed.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status.

R-E-D CODE

R (Rarity)
1 = Rare but found in sufficient numbers and distributed widely enough that potential for extinction is low at this time.

2 = Occurrence confined to several populations or to one extended population.

3 = Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

E (Endangerment)
1 = Not endangered
2 = Endangered in a portion of its range
3 = Endangered throughout its range

D (Distribution)
1 = More or less widespread outside California
2 = Rare outside California
3 = Endemic to California